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WEEKLY

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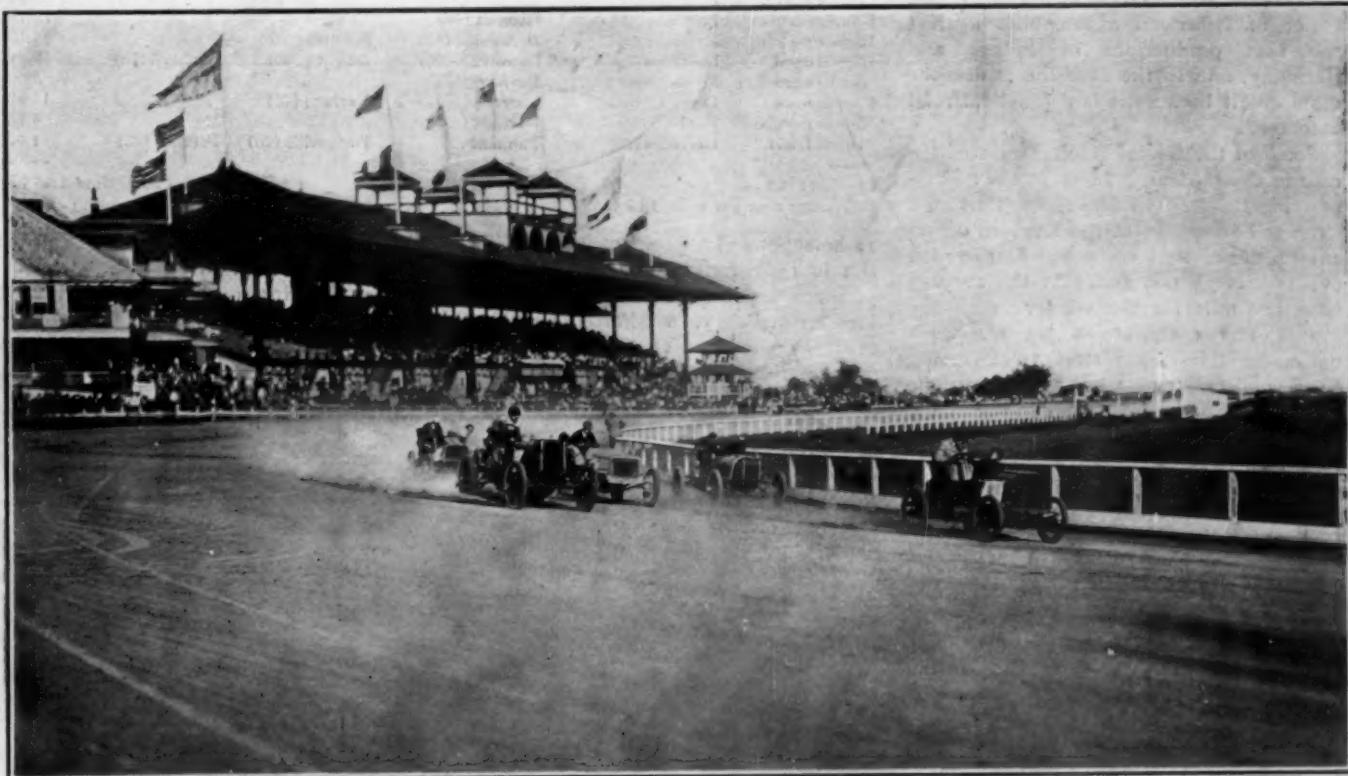
A Carnival of Sport at Yonkers' Track.

Barney Oldfield in his "999" and the Franklin Air-cooled Racer Splendidly Uphold the American Car — Remarkable Running of the Decauville, Darracq and Mercedes Machines.

FAST and furious sport was enjoyed by several thousand spectators who journeyed from New York City to the Empire City race track at Yonkers last Saturday. The meet, promoted somewhat hastily in some of its features

has ever been run on American soil. Features that contributed to this end were the breaking of his own world's record of 56 2-5 seconds made at Columbus, O., on July 4, by Barney Oldfield, who, on Saturday, with the most nerve-tingling

open race for machines weighing less than 1,200 pounds, and the ten-mile match race against a 10-horsepower Renault in record-breaking time by John Wilkinson on a 10-horsepower air-cooled Franklins the consistent fast running of the 40-



ROUNDING THE FIRST TURN IN THE 15-MILE EVENT—DARRACQ LEADING, 70 H. P. PANHARD ON THE OUTSIDE.

to make up for the loss of the Winton-Fournier match which had been arranged as the leading feature, proved the most remarkable as well as the most successful, from the racing standpoint at least, that

recklessness, placed the figures at :55 4-5; Oldfield's astonishingly fast driving in the second heat of his five-mile match race with F. A. LaRoche in a 35-horsepower Darracq; the winning of the five-mile

horsepower Decauville that had competed in the Paris-Madrid race; the smooth and fast work of the 40-horsepower Darracq driven by Louis Sincholle; the runaway of O. W. Bright's 60-horsepower Mercedes



THE DEAUVILLE 40-H. P. WINNER 15-MILE FREE-FOR-ALL.

in the fifteen-mile match race against the 40-horsepower Deauville and the Gordon Bennett 80-horsepower Peerless racer.

Several surprises developed during the four hours of racing, which began at 2:15 P. M. Chief of these was the wonderful and uniform speed shown by John Wilkinson's little Franklin—an American light car of daringly original design weighing but 900 pounds, and driven by a four-cylinder, air-cooled motor. Between it and Oldfield's Ford-Cooper machine was divided the whole credit of upholding the honor of American automobiles against the best productions of France and Germany, and to the Franklin is due the more credit because it is a practical road machine.

Some of the remarkable features of the race meet are clearly shown in the accompanying tables, which show that the average horsepower of the fourteen different machines that competed in the nine events was 35 1-2, and that the average time per mile for the winner in all the events was 1 minute 8 3-5 seconds—unquestionably the fastest track racing for a whole meet that has ever been done on a mile dirt track anywhere in the world. Of the fourteen competing cars six were American and eight foreign. There were thirty starters in the nine events. The total distance covered in the races by the leaders was sixty-seven miles.

All world's track records for one mile were broken by Oldfield; all world's track records from one to ten miles for gasoline machines weighing less than 1,200 pounds were broken by the Franklin, while Laurent Grosso, in Bright's 60-horsepower Mercedes broke A. C. Bostwick's records for eleven, twelve and thirteen miles made at the Empire City track October 8, 1901, and Henri Fournier's records for fourteen and fifteen miles made at Fort Erie, Can. on September 26, 1901, for cars weighing more than 2,000 pounds.

FIRST BLOOD FOR THE FRANKLIN.

The first event called was the five-mile race, open to machines of any motive

power weighing less than 1,200 pounds for a first prize silver trophy valued at \$100 and a \$50 second prize trophy. Five starters lined up at the seven-eighths mile pole for a flying start. These were L. O. Gitchell in Col. W. P. Marlow's 16-horsepower Darracq; J. C. Robbins in the Waltham Mfg. Co.'s 4-horsepower Orient; F. A. La Roche in the F. A. La Roche Co.'s

wire and the race was started over. The second start was a good one. The Franklin promptly moved up into the lead and gained steadily on all the other competitors to the end, winning in 6:54 2-5. The contestants strung out on the backstretch in the first mile and coming into the home-stretch the Franklin made a burst of speed

Competing Machines and Drivers.

MACHINE.	H. P.	OWNER.	DRIVER.
Renault	10	J. Insley Blair	Joseph Tracy
Franklin	10	Franklin Mfg. Co.	John Wilkinson
Darracq	16	Col. W. P. Marlow	L. O. Gitchell
Orient	4	Waltham Mfg. Co.	J. C. Robbins
La Roche	12	F. A. La Roche Co.	F. A. La Roche
Northern	6	Homan & Schultz	F. F. Goodman
Panhard	35	J. Insley Blair	Joseph Tracy
Darracq	40	Jules Sincholle
Darracq	35	Am. Darracq Auto. Co.	George Papillon
Decauville	40	Societe Decauville	Henri Page
Ford-Cooper	80	Barney Oldfield
Peerless	80	Peerless Motor Car Co.	C. G. Wrigley
Mercedes	60	O. W. Bright	Laurent Grosso
Panhard	70	M. C. Herman	F. Froger

498 Total horsepower.

35 1/2 average horsepower.

and ran away, with Gitchell second over the wire, LaRoche third, Robbins fourth and the Northern a bad fifth. At the end of the second mile the Franklin had increased its lead to nearly half a mile. On

Table of Winners and Times.

RACE.	FIRST.	SECOND.	THIRD.	FOURTH.	TIMES.
5-mile open	Franklin (10)	Darracq (16)	La Roche (12)	Orient (14)	6:54 2-5
1-mile exhib.	Ford-Cooper (80)				:55 2-5
10-mile match	Franklin (10)	Renault (10)			15:15 1-5
15-mile match	Mercedes (60)	Decauville (40)	Peerless (80)		16:10 4-5
10-mile open	Darracq (40)	Decauville (40)	Darracq (35)	Panhard (70)	10:52 4-5
5-mile open	Ford-Cooper (80)	Darracq (40)			5:09 4-5
15-mile open	Decauville (40)	Darracq (35)	Darracq (40)		16:39 4-5
5-mile match	Ford-Cooper (80)	Darracq (40)			4:55
1-mile trials	Mercedes (60)	Panhard (70)	Decauville (40)	Peerless (80)	1:03 1-5

Total time 1:16:36 2-5

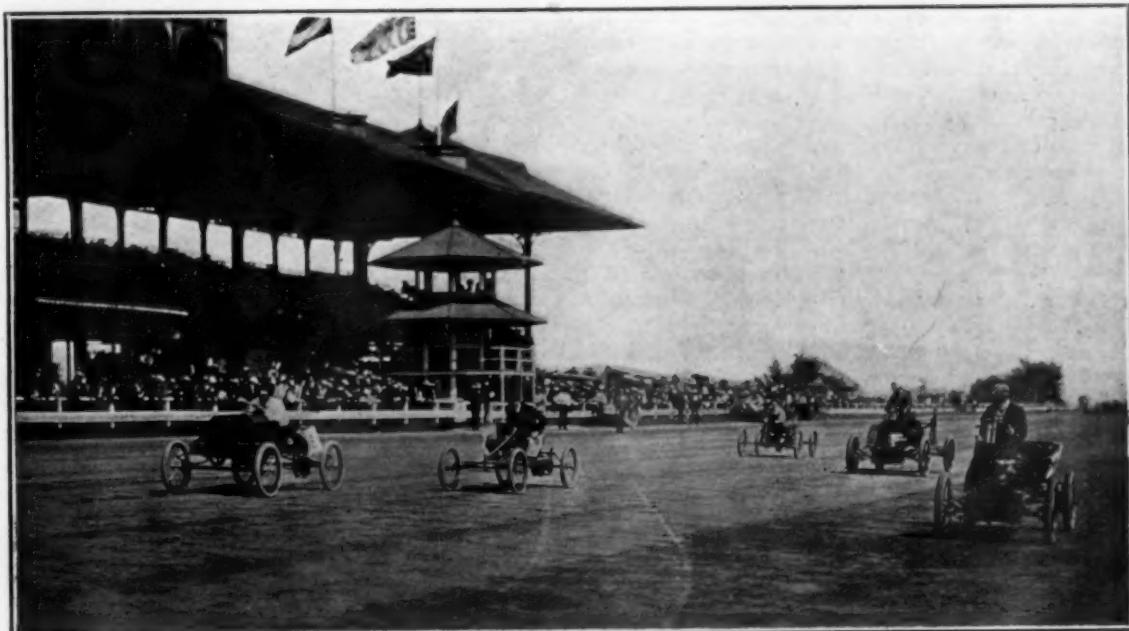
67 miles total
Average time per mile, 1:08 3-5.

12-horsepower La Roche car; John Wilkinson in the Franklin Mfg. Co.'s 10-horsepower Franklin, and F. F. Goodman in Homan & Schultz's 6-horsepower Northern. In the first start the contestants were uneven as they crossed the starting

the last turn in the fourth mile the Northern dropped out. With another burst of speed Wilkinson passed under the wire winner by nearly three-quarters of a mile at the end of the fifth mile and nearly lapped Robbins, who was only 150 feet ahead start-



WILKINSON'S 10-H. P. FRANKLIN, WINNER 5-MILE OPEN AND 10-MILE MATCH.



START OF 5-MILE RACE FOR MACHINES UNDER 1,200 LBS., WON BY FRANKLIN, AT LEFT.

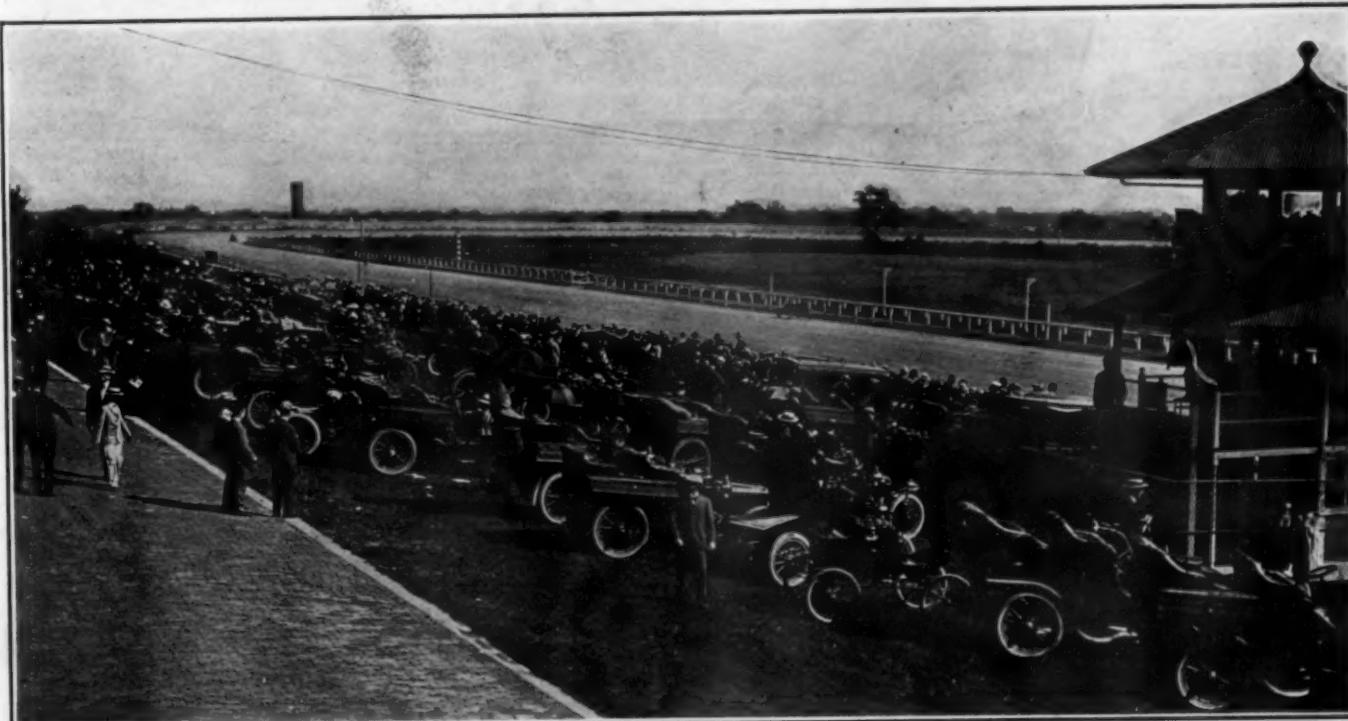
ing his fifth mile. The other contestants had maintained their relative positions after the first mile, Gitchell finishing second in 8:06 4-5, and LaRoche third in 8:11 2-5.

OLDFIELD BREAKS MILE RECORD.

A burst of applause followed the announcement that Barney Oldfield would next go against his own mile record of 56 2-5 seconds made at Columbus, Ohio, on July 4. He was intently watched as, seated in his familiar red 80-horsepower Ford-Cooper racer, clad in a red leather coat, bareheaded and with a partly smoked cigar in his mouth, he was towed backward

around the turn into the straight by the little Darracq official car. Slowly the machines backed into position about a third of a mile from the starting wire in front of the grandstand. There was a short wait while Oldfield turned over his huge engine with a long starting crank. Then he hastily got into position in his seat, the red flag of the official dipped and with a rattle and bang the formidable machine got under way. Quickly it gathered headway as Barney steered diagonally across the turn and close to the outer fence for a long straight flight down the home straight. Before it had passed

over half the distance to the wire it had got under full speed, going at less than a minute to the mile. Despite the terrific speed, the absolutely fearless and reckless driver, wearing his perpetual good-natured smile, nonchalantly waved his right hand to the crowded grandstand just before he passed the judges' stand. With an irreversible steering mechanism this would entail little danger, but old "999" has direct steering controlled by two vertical handles on the end of a transverse bar at the top of the perpendicular steering column. To those familiar with this fact and with the knowledge that the machine has no



NON-CONTESTING CARS AND SPECTATORS ON LAWN IN FRONT OF GRAND STAND.

differential, no change speed gears, and no springs on the rear axle, Oldfield's act raised the expectancy of a fatal disaster to almost a certainty. And this was heightened still more if possible by the tremendous sidewise slide of the rear wheels as, only a few seconds later, the thundering car was steered from the outside of the broad track to the pole to increase the radius of the turn, and raised a thick cloud of dust that rolled and, carried by the breeze, passed over and momentarily obscured the group of onlookers hanging onto the fence in front of the clubhouse. How much the rear wheels skidded is uncertain, but after the dust partially cleared away the four tracks left in the dirt showed those of the rear wheels apparently from eight to ten feet outside of those of the front wheels. Only the low center of gravity kept the machine from turning over, and only the driver's strong and steady arms and clear head and eye kept the car on a true course around the sweep of the turn into the backstretch. Down that he flew bent low over his handles, and keeping close to the pole. He took the big turn at the opposite end of the course with a steady sweep and emerged again into the home straight, watched breathlessly by every one. Again he cut diagonally across the track to the outside, this time smoothly and raising but little dust. As he shot for the second time down the home-stretch like the red flash from the muzzle of a gun, he leaned far out to the right apparently to measure his distance from the fence and the people lined up along it. A few ticks of the watch and the split-second hands on the stop watches ceased moving as he passed under the wire. Once more the turn was taken diagonally and as the car slewed Oldfield was seen to bound several times in his seat like a novice in the saddle of a singlefooting horse. Anticipation of a terrible accident again rose to the highest pitch, but old "999" quickly settled into her steady gait as the engine was throttled and, circling the track more slowly, Oldfield came to a stop in front of the grandstand, cigar still in his mouth and his face spattered with oil and dust. He received congratulations and a subdued applause, the crowd having hardly regained its breath sufficiently to cheer lustily. The time announced for the mile was 55 4-5 seconds, a cut of three-fifths of a second from Oldfield's own world's record. Seven or eight newspaper photographers, with their big boxes, gathered and drove the crowding spectators back while hurried exposures were made on the intrepid hero of the day, who, with the same good-natured smile submitted gracefully.

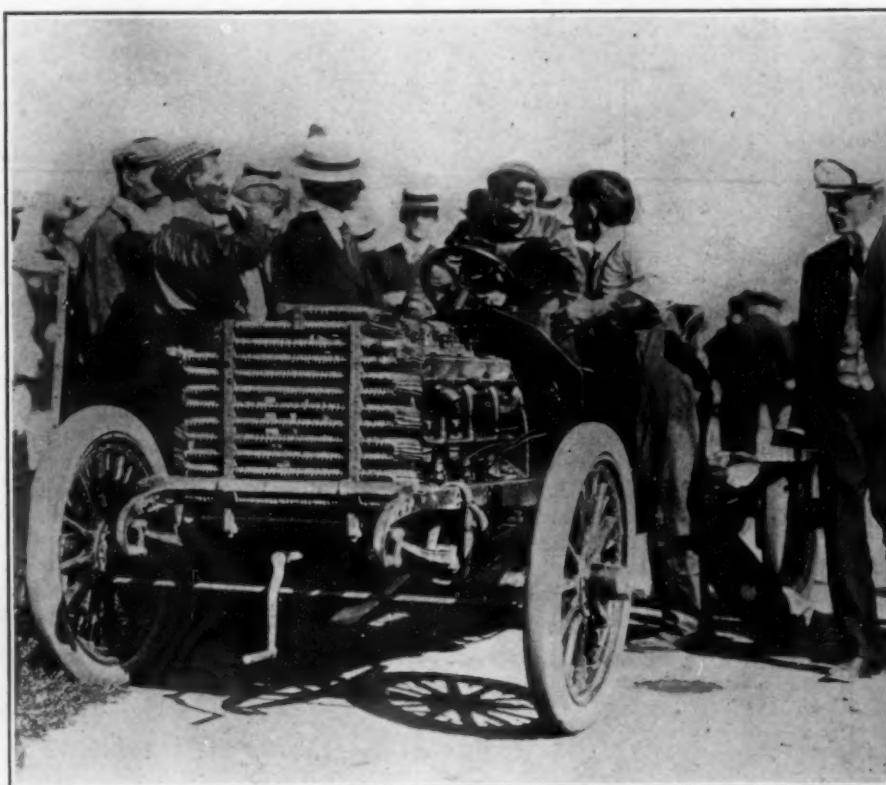
LIGHT-WEIGHT RECORDS MOWED DOWN.

There were but two starters in the ten-mile match race, F. F. Goodman withdrawing his 6-horsepower Northern as it was clearly outclassed. So John Wilkinson, in his 10-horsepower Franklin, and Joseph Tracy, in J. Insley Blair's 10-horse-

power Renault, started side by side to try conclusions. It would have been a good race if the Renault had been in good running condition but it ran the race practically on one cylinder, the other of the pair missing fire almost constantly. The event therefore resolved itself into a record breaking exhibition by the Franklin. The first start was not a good one, the Renault crossing the tape a couple of lengths in the lead, so a second start was ordered. But in the interval, the official announcer, through his megaphone, said: "I am requested by Oldfield to announce that he does not use Russian gasoline and would be pleased to meet any driver in the world; that he will go to the international race

TRIANGULAR MATCH RACE.

The three-cornered match race at fifteen miles between the Gordon Bennett 80-horsepower Peerless racing car, driven by C. G. Wridgway; the Paris-Madrid 40-horsepower Decauville driven by Henri Page, who operated it in the big foreign road race, and O. W. Bright's 60-horsepower Mercedes, similar in design to Clarence Gray Dinsmore's Mercedes on which Jenatzy won the international cup races, was a record breaking but not a particularly exciting event. In the line-up the Mercedes had the pole and the Decauville the outside. The Mercedes passed under the wire in the lead, with the Decauville second. The Peerless made a slow start



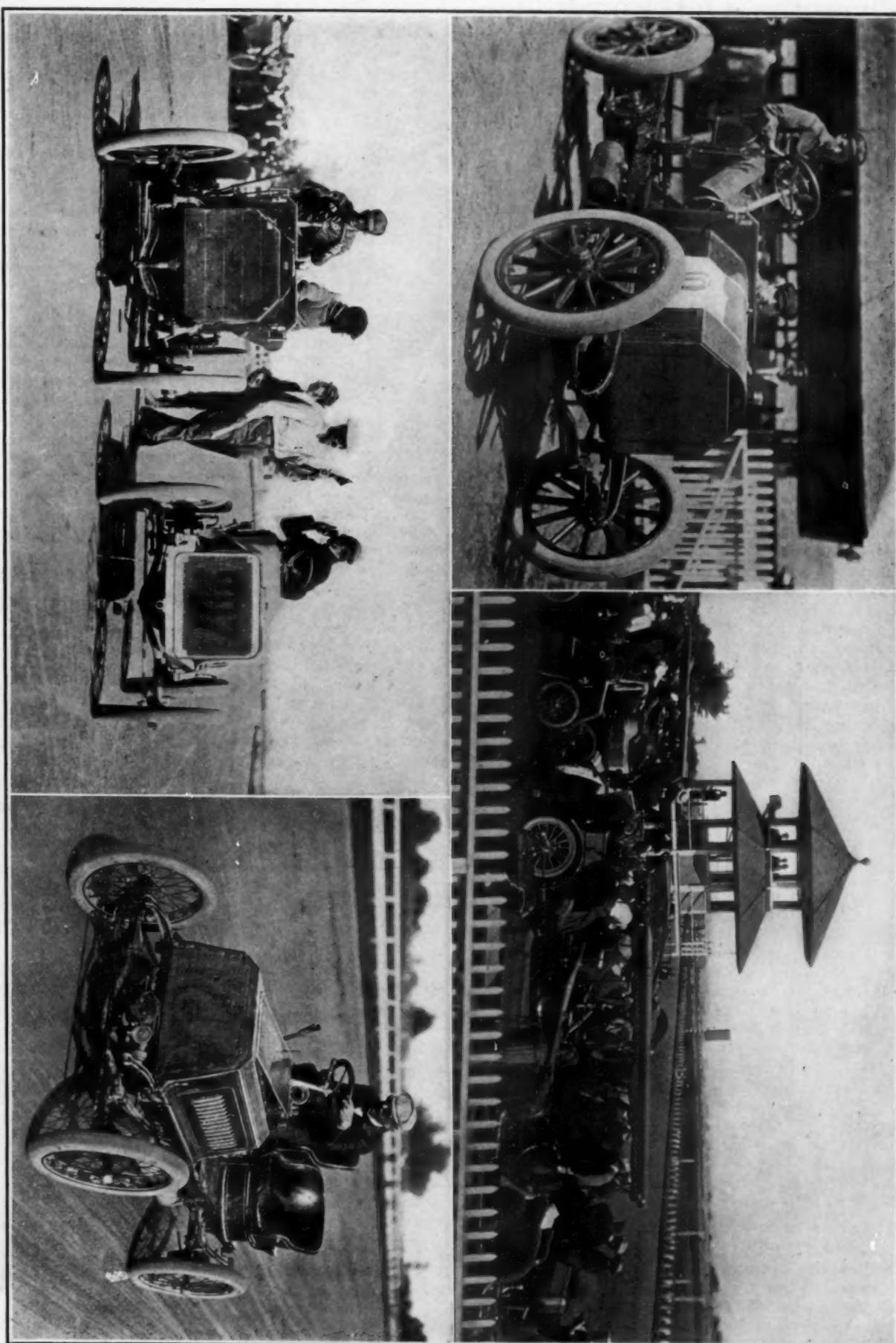
PEERLESS GORDON BENNETT RACER.—Wridgway at wheel, talking to Barney Oldfield.

next year and that he won't be left at the post, either." Great applause.

The second start of the match was an improvement. Wilkinson, however, almost immediately took the lead, which he rapidly increased to 100 feet at the end of the first mile, maintained through the second, increased to 200 in the third, to 400 in the fourth and to a quarter mile in the fifth. The Renault fired irregularly and intermittently and at the end of the eighth mile was half a mile to the bad. It lost ground rapidly in the next two laps and was lapped by its opponent in the first turn after the Franklin finished the ten miles, winner in 15:15 1-5. Tracy's time, after he made one more circuit, was 17:07 4-5. Wilkinson's intermediate times by miles, which are given in the summaries, are all new records for machines weighing less than 1,200 pounds.

The German machine slowly increased its advantage around the turn but entering the backstretch the French car made a pretty burst of speed that brought it up on even terms with the leaders in the middle of the back straight, which elicited a volume of enthusiastic cheers, in which the French operators present joined with national pride and gesticulation. For a moment it looked as if the Decauville would forge to the front, but it was only momentarily, for Laurent Grosso, driving the Mercedes, opened her up a little more and went to the front and from then to the end steadily increased his lead, passing the judges' stand 100 feet ahead at the end of the first mile and winning by two-thirds of a mile in 16:10 4-5. In the second mile the three machines were about equi-distant apart, separated by gaps of 100 yards, the

(Continued on another page.)



O. W. Bright's 60-H. P. Mercedes, Winner 15-Mile Match Race.

60-H. P. Mercedes and 40-H. P. Decauville Line Up for Start of 15-Mile Match.

COMPETING FOREIGN CARS AND JUDGES' STAND, AT THE EMPIRE CITY TRACK AUTOMOBILE RACES, YONKERS, N. Y., JULY 25.

Judge's Stand and Group of Spectators' Cars on the Lawn.

F. A. La Roch's 35-H. P. Darracq that won the 10-Mile Open.

Over the Old Forty-Nine Trail in an American Automobile.

BY M. C. KRARUP.

COLORADO SPRINGS, Col., July 19.—It was at Carson City that we began to suspect that there might be more difficult tasks before us than ascents and descents

through a canyon of moderate depth and with odd, rounded formations of brown conglomerate rock. In this canyon we crossed the railway track ten times, and



CAUGHT IN THE SAND IN THE ALKALI LANDS.

over narrow mountain roads. Having only 12-horsepower at disposal and a load of about 3,000 pounds, we had imagined that we should be at a disadvantage compared with horse-drawn vehicles in the steep Sierras more than anywhere else. But it was noticed that not a single team had overtaken us between Placerville and Carson; not a single explosion had been missed and we had not had a single involuntary stop; that is to say, we had stopped occasionally to look after things, but the motor had never "laid down" or "died" when we expected it to work. Furthermore, the arrangements made for increasing the compression in the cylinder—by lengthening the connecting rod a trifle—so as to offset the power loss due to high altitude, had not been carried into effect, and nevertheless the loss of power had been imperceptible. On the theory that rarefied air would suck in about as much gasoline through the carburetor nozzle as the heavier air of the lowlands, or even a little more by reason of its higher velocity, the proportion of neutral air to vapor charge had merely been increased more than ordinarily, and the results had been satisfactory.

Just before starting from Carson at 7 o'clock Thursday morning, June 25, the first skip in the explosions was observed, while the car stood still and the motor ran softly on lowest throttling. In a fraction of a minute perfect regularity was established by a slight turn on the screw regulating the points on the induction coil.

DIRE PREDICTIONS IN RENO.

"Old Pacific" bore us to Reno, thirty-five miles, in 2 hours 35 minutes, the first part of the trip taking us through sagebrush and several varieties of sandy roads to Washoe City, the remnants of what was once a county seat town; thence

finally emerged onto an old neglected stretch of macadamized road, full of holes



BUTTE WORN BY SAND STORMS.

but affording fairly good driving. Up to this date it is the only piece of macadam that has come under our eyes and our

In Reno, where Californians in matrimonial or anti-matrimonial haste have knots tied or untied with all facile celerity of Sioux Falls, S. Dak., and Gretna Green rolled into one, open gaming houses and saloons are a conspicuous though not a prepossessing feature. The town, however, boasts also of more legitimate business than any other town in Nevada. The easy hospitality accorded us was here for the first time mingled with direful prophecies of what awaited us and unconcealed distrust of our ability to traverse the desert regions of the State. "Two years ago an attempt was made and failed." This was the refrain which was ever heard from this place on to Winnemucca, where it changed into gladsome assurance that we were "over the worst." The memory of the earlier attempt was remarkably fresh, but events proved that popular assumptions and notions, either for bad or for good, were poorly founded. Roads declared practically impassable caused us little trouble and stretches pronounced excellent, but over which no motor car had previously traveled or attempted to travel, were found extremely severe on "Pac.," and especially on our patience.

At Reno we added one to our party. Unwilling to depend on local skill in case something should happen to our machine, we had arranged that N. O. Allyn, a skilful machinist, should follow our course through this entirely unfamiliar country by railway train. This became irksome to Allyn, however, as his professional services were never needed, and we others, taught full confidence in "Pac.'s" powers to pull through any difficulties, consented to give her an additional load. So, hereafter, Allyn forsook the train and took his place on top of the spare tires, canvas and blankets piled behind the seats.

After laying in fifteen gallons of gasoline at Reno, the expedition reached Wadsworth the same evening, the cyclometer pointing at 430 1-2 miles, making in all 70 miles that day in two stages. The road to



EXTRICATING "OLD PACIFIC" FROM THE QUICK SANDS.

wheels outside of corporate towns in the western portion of the United States. It extends for about seven or eight miles.

Wadsworth was rough, stony and sandy and entirely devoid of interest except as a mild introduction to the sand hills

beyond. It had been nicely calculated that gasoline freight bills, sent on from Sacramento, and photographic films ordered by telegram would await us at Wadsworth, so as to permit an early start Friday morning, but instead we were obliged to wait a whole day in this little railroad division town which lies in a kettle of sand slopes and is destined to be blotted from the map in a near future, when its shops shall have been removed to Reno, and the new grade will be completed leaving the handful of tumble-down houses cut off from their only *raison d'être*, the railroad. The postmaster's assistant promised to deliver our mail after closing hours Friday evening, but a town dance was organized and she forgot her promise. Nothing could be obtained till Saturday morning. The interim was waste time, all but one hour during Friday's drear waiting when the idea was conceived and carried out of placing a little canvas awning over the cooling coils to intercept the rays of the sun and gather the cooling air current two fold. Stories about the heat in the desert had evidently made us uneasy.

little air was stirring was with us and there was no possibility of progressing fast enough to create a current by speed.

A JOKE ON THE CITIZENS.

When seeing us ready to start at 7.30 o'clock Saturday morning, a genial soul

reach of ordinary wheels, and such is the tradition of its terrors that the town cheerfully expected us to return for reinforcements after tackling it, and when we arrived at the top we found an enterprising man awaiting developments with a team,



DESOLATE COUNTRY WHERE AUTO WAS NEVER SEEN BEFORE.

who had known thirst on these plains, presented us with a case of twelve bottles of Milwaukee beer packed in ice and wrapped in wet gunnysacks. We did not demur against the burden. In the imme-

rope and tackle in readiness for our expected emergency, as well as a crowd of interested spectators. Broad minded enough to see that the laugh was on them, they cheered us loudly as we passed. And yet the climb had not been entirely without difficulties. When the rear wheels began to spin in the deep and loose sand, sputtering it rearward, traction failing partially, the two lengths of canvas, each twenty feet, were gotten down. One was placed between rear and front wheels, crosswise, and the other lengthwise before the front wheels extending up the hill. Though the rear canvass was much crumpled by the process, enough traction was left to get the car entirely onto the front canvas, and then it rolled easily upward, as the weight on the front wheels prevented the rear wheels from pulling the canvas backward. Three times each strip of canvas was laid before the other, and then the top was reached, the entire climb being only about 120 feet in length. We blessed the canvas and proceeded, but there was still twelve miles of sand ahead of us, though none of as steep a gradient. Twice more we were obliged to spread canvas to get through bad spots, and the nature of the sand may be imagined from the fact that on downgrades of 10 per cent. in one place and 14 per cent. in another, the car not only did not coast down but required the use of the low gear to reach the foot of the incline. It was 94 degrees Fahrenheit in the shade and 125 degrees in the sand toward the time when most of it was finally behind us, at 11.10 o'clock A. M. Three hours and forty minutes to make twelve miles! Even where the resistance did not call for the full power of the engine, it was necessary to go slowly, with throttled charges, so as to get a little benefit of the feeble wind from behind, and prevent the cooling water from boiling, and we admitted to ourselves that under the extraordinary circumstances in which we were placed there would have been an advantage in cooling by a fan or in a largely increased radiation surface.



ARRIVAL OF OVERLANDERS IN CIVILIZATION AT COLORADO SPRINGS.

The purpose of getting more air into the coils by this device was thwarted, however, for all the way through the sand what

immediate vicinity of the town rises a sandhill of formidable proportions and reputed to be "all sand" with no firm bottom within

BEGINNING OF THE ALKALI PLAINS.

The alkali plains, white and trying on the eyes though they were, now gave welcome relief from the too-slow pace, and the cyclometer rolled up six miles rapidly until the discovery was made that one of the canvas strips had been lost off the vehicle. It was found five miles back, and we noted down ten miles of unnecessary driving and a time loss of fifty-one minutes against this second admonition to strap things securely to the vehicle.

Salt and hot water springs sent clouds of vapor out of the earth here and there in the distance, and the seemingly low mountain range which bounded the horizon to the east made the plain appear to be one of small extent, as we sped along the eastern edge of another low range also extending north and south. At the salt works near White Plains, a deep freshwater well supplied the cooling water tank with what it had lost, and shortly thereafter we entered the Humboldt River Sink, and began to understand that rivers in this State mostly have no definite outlet, but disappear in the ground when evaporation and irrigation have exhausted their resources; and where they sink under the surface they leave a level and perfectly white deposit of alkali totally devoid of vegetation. It looks inviting to the motorist, but only when it has been dry for some time will it support the load of a car, and after any little rain it becomes so treacherous and slippery that it is better to pass around it when at all possible.

THE FIRST PUNCTURE.

Running along at moderate speed with this class of land always in sight, if he were not actually passing over it, and hemmed in with the mountain ranges on both sides, we soon put Meriam and White Plains behind us and sped along the railroad track toward Lovelocks, mostly over rough ground strewn with the relics and debris which denote where a gang of men had recently been working. It was in such a place that we experienced our first tire puncture, our left tire picking up a small board with a protruding nail and throwing the board over our heads while retaining the nail. The delay was one of twenty minutes only, but Tom was chagrined, as he considered that a little more care might have avoided the accident. It was 5:45 in the afternoon when the repair was finished and the cyclometer showed that in spite of sand hills and evil predictions, we had laid behind us fifty-nine miles. We were still eighteen miles from Lovelocks, but soon we entered the wonderful little valley of which Lovelocks is the center and where irrigation has produced such wonders in the production of alfalfa and other feed stuffs that the Western Meat Company, a large corporation, is said to winter nearly all its cattle there. The last six or seven miles before entering the pretty towns of this oasis was superior in smoothness to any macadamized road and afforded us a delightful burst of speed

after the hard grind of the early morning. We arrived at Lovelocks at 7:12 o'clock and found that our gasoline consumption had not exceeded six gallons.

HURDLING THE ARROYAS.

The following day, Sunday morning, the start was made at 6:12 o'clock with the



"BRUSHING" A SOFT, WET ROAD.

good wishes of the whole town accompanying the trio. It was only a short ride until the desert proper was again reached, where sand and sage brush and alkali reign supreme. Close to the river where no irrigation has yet been organized, the surface was deeply furrowed by ravines—here commonly called arroyas—with perpendicular walls, and to cross these frequently involved a sinuous course of the vehicle, part of which lay in the bottom of the ravine, until a place could be found



UNDER THE WATER WORN WALLS.

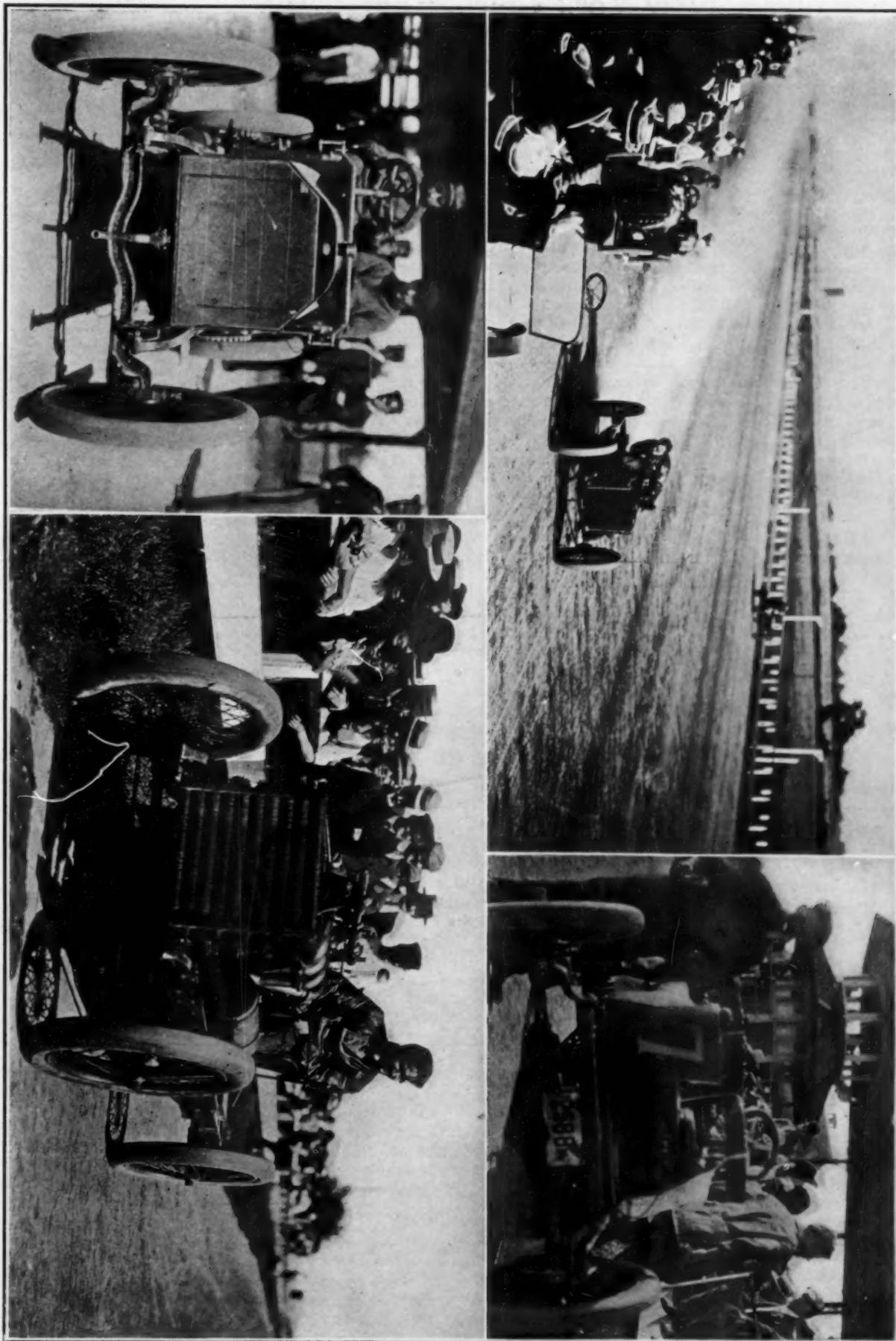
where the ascent of the opposite brink could be made.

That the road, on the whole, however, was not a difficult one is shown by the time made; for the car arrived at Rye Patch at 8:33 o'clock, having then made more than twenty-five miles. Here a

supply of gasoline, forwarded for the purpose, was found at the station and eight gallons was taken on, the remainder of the supply being donated to the town. The vicinity of Rye Patch abounds in short hills with grades up to 23 per cent., most of them being the ups and downs of those ravines before mentioned, where the soil seems like a marl which pulverizes as fine as flour under the rubber tires. At 10:40 o'clock Humboldt House was reached and two photos taken at this point show the immediate proximity which can exist between desert and oasis. On one side the snow-clad mountain range looms up and the stony ground hardly leaves room for even the sage brush to take root; on the other side a few acres surrounding the Humboldt House show a luxurious vegetation and the green foliage of large trees, all the result of a little irrigation. At this place a crowd of Indians, squaws and papooses, viewed the expedition curiously, waiting probably to be offered money for the privilege of photographing them; for the aborigines of the State of Nevada have learned to ask money for everything they do and especially for pandering to the curiosity of travelers. They hang around all the towns of Nevada doing nothing and living upon the bounty of the government. Occasionally one of them consents to act as guide over mountain roads, but as a rule they pass their time either loitering in the shade or riding on top of freight trains, a diversion they seem to enjoy greatly and which, by consent of the railroad companies, they are permitted to indulge free of charge. Mills City, so called from an old mill located there, was reached at 11:42 o'clock; cyclometer 555 5-8. The thermometer at that time stood at 90 in the shade, the barometer 25.55, indicating an altitude of about 4,400 feet.

Owing to differences of opinion among the members of the Ladies' Automobile Club, of London, England, the Automobile Club of Great Britain and Ireland has decreed not to sanction women's clubs, and has withdrawn a promised subsidy of £1,000 a year. Meanwhile the club rooms in Piccadilly which were leased for the women for three years by the Automobile Club remain unoccupied.

To celebrate the completion of the world's largest tunnel—Simplon—there will be an international exposition at Milan, the nearest important Italian city. The exposition is set for the opening of the tunnel to traffic in 1905. A fund of \$600,000 has been raised, and the committee having the matter in charge has established certain rules with a view to confining the exhibits within certain lines. The departments of transportation by land and water, navigation of the air, and the division dealing with the question of protection from accident in the transportation world, may be international in character.



Oldfield Winning 5-Mile Match from La Roche in 4:55.

O. W. Bright's 60-H.P. Mercedes, Laurent Gresco Steering

SNAP SHOTS AT THE AUTOMOBILE RACE MEET ON EMPIRE CITY TRACK, YONKERS, NEW YORK, JULY 25.

Rear View of Peerless, 80-H.P. Car No. 7 in the Gordon Bennett.

An Unbeatable Pair—Good Natured Barney Oldfield and Old "999."

Planning a New York-Chicago Highway.

Greatest of National Road Enterprises—Historical Development and Changing Directions of the Project—Outline of the Route Most in Favor.

BY ROBERT BRUCE.

The idea of connecting the East and the West by one or more continuous road systems has been before the people of the United States in some form or other for more than a hundred years. Early American statesmanship recognized the need for better means of communication and travel between the seaboard and the new settlements to the South and West than the paths blazed by the pioneers; and formulated the policy of national aid and administration at the very beginning. So long as travel and commerce were entirely dependent upon open thoroughfares and navigable watercourses, Federal authority was transmitted and upheld through the same channels. But as the public business was transferred very largely to the rails and the wires, government interest in the common highways of the country was materially decreased, only to be re-established in some degree of late years, as the magnitude of the work and the inadequacy of local, sectional and even of State measures have become widely apparent.

It was during this long and general hiatus in road interest that the American railways made their greatest strides, reaching one after another across the continent. Between the two lines of enterprise there was, however, one essential difference. The object of the early highway was to penetrate as far as possible into the unknown West, with little or no thought of a finished work. But the object of the railways was to find the ultimate termini as expeditiously as possible for the purpose of developing end-to-end along with local traffic. The one slumbered while the other worked to the achievement of its great end. Both in their own good time helped to push back the Western frontier, until it now rests upon the Pacific. But while the railway is open throughout the year and kept in uniformly good condition for efficiency's sake, the highway remains not only incomplete as to plan, but hindered in its usefulness by conditions which call loudly upon the national wealth and enterprise to mend.

THE FIRST "NATIONAL ROAD."

The shifting of the Federal capital from the seaboard to the banks of the Potomac was happily contemporaneous with an enlarged popular knowledge of the new West. Exploration and discovery had brought the realities and the opportunities of the mid-continent to light, and settlements were already scattered all the way to the Mississippi and the Missouri river valleys. Federal authority and control had to follow by the most available means. On this point there could be no difference of opinion; a

highway constructed after the best road-making practice of the times should be opened and maintained between the new capital at Washington and the Great Father of Waters. It was the old Roman way, improved upon by the spirit and enterprise of the young republic.

Tradition ascribes the original conception to George Washington, and places the time as during his second presidential term; but more likely the statesmanship of Henry Clay was the more responsible for it. Be that as it may, it is on record that Congress debated the matter informally in 1802, only to put it off without further attention for four years. In 1806 the project was revived and an appropriation of \$30,000 made for a preliminary survey from the Potomac to the Ohio river. That survey was not only late in starting, but it was yet uncompleted when stopped altogether by the war of 1812. The work was resumed in 1816, and continued with interruptions, through western Maryland, southwestern Pennsylvania, into West Virginia, and across Ohio and Indiana until the Illinois State line was reached, just beyond Terre Haute, Ind., in 1838. It was later continued across Illinois to St. Louis, Mo., forming one continuous thoroughfare from the Atlantic seaboard to the Mississippi River Valley. From first to last it is estimated that the Federal government invested \$6,821,246 in the work; and the several States (particularly in the western end) perhaps a half more.

Coaches carrying passengers and the mails, as well as freight wagons in large numbers, continued to use the road—commonly called the Cumberland road—until 1853, when the construction of the Baltimore and Ohio Railroad was so far completed as to make its use as a highway of travel and commerce no longer profitable. Gradually it has been relinquished by the Federal government to the States of Maryland, Pennsylvania, West Virginia, Ohio, Indiana and Illinois, and by them severally neglected until it is now in bad condition practically from one terminus to the other. This historic thoroughfare is, however, still passable; and with the right sort of reconstruction and care it might become a greater highway of the twentieth century than of the nineteenth.

THE MISSISSIPPI AS A GOAL.

Looking back now upon the vast though half-forgotten work, one notices how completely it overlooks the later influence of the Great Lakes in determining the direction of through travel East and West. But the centers of population seventy-five years

years ago were not the same as they are to-day. The first census—that of 1790—gave a little less than 4,000,000 population for the entire country. Among the States, Virginia ranked first, then Pennsylvania, North Carolina, Massachusetts, New York, Maryland, South Carolina, and Connecticut. Northern Ohio, Indiana and Illinois—important factors in the railroad routes of a later day—were little known; and these States themselves were scarcely more than an interminable wilderness and prairie country separating the Alleghenies from the great valley of the mid-continent.

Of these 4,000,000 people in 1790, too, about one-fifth were slaves, and the now comparatively narrow country between the Atlantic seaboard and the Alleghenies was the home of all of them except the daring few who had made settlements along the river courses—principally the Ohio—and alongside the southern harbors. There were only five cities of 10,000 and over, Philadelphia, New York, Boston, Charlestown, and Baltimore; and the center of population was about 23 miles east of the latter. Stages ran regularly between New York and Philadelphia in three days, or two days at best. Lake commerce as a factor of influence upon the directions of through travel was a thing unknown.

Again, the Mississippi was established in fact and in story long before the great lakes were appreciated at their true value. The pony express of the early days ran between St. Louis and St. Joseph, Mo., through a corner of Kansas and over the Santa Fe trail to California. Such parts of the Northwest and the Southwest as were known owed that fact to their accessibility from St. Louis and other points by the Mississippi and Missouri rivers, in somewhat the same way as the South was tributary to Baltimore and Washington by the Potomac River and Chesapeake Bay to the ocean. The great city at the head of Lake Michigan was a later-day creation of the railroads. Men paddled to St. Paul, and by portage and paddle reached even to Manitoba ahead of the railroad, working their way up the Mississippi and striking out into the northern wilderness. But the railroad found a shorter way across the State of Wisconsin, until Chicago and the Twin Cities are separated only by a night.

The completion and gradual extension of the Baltimore & Ohio railroad destroyed the old-time usefulness of the Cumberland Road, for it carried passengers and freight quicker and cheaper than either could be moved over the best highway in the world. Of pleasure travel there was little or none. Not only was the idea of road travel as a means of recreation unthought of but the opportunities for enjoyment would be small at best. The lumbering, crowded stages were no comfort at ten or twelve miles an hour, with their meagre accommodations and frequent dangers. Pleasure travel came into being with improved means of road locomotion—the modern

light carriage, the bicycle, and lastly the automobile, greatest of all.

HUDSON RIVER-GREAT LAKES ROUTE.

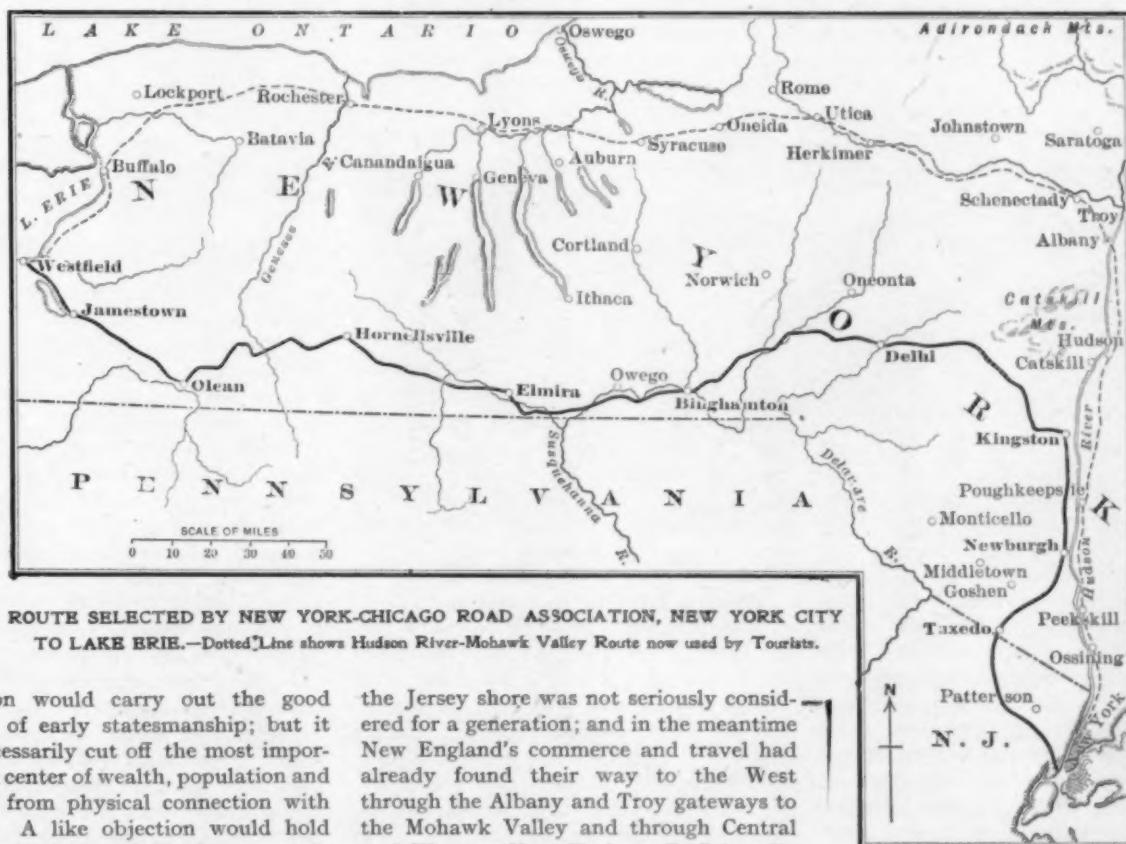
The situation of New York City on an island, with but one clear exit—that to the north—may have affected the ultimate route of even the trans-continental highway, by becoming the metropolis of the Nation. To start such a highway from

Rhinecliff and Kingston, and between Fishkill-on-Hudson and Newburg, by means of which a highway from New York to Chicago, going up the west side of the Hudson to Newburg and Kingston could be connected with Western Massachusetts and Northern Connecticut.

On the other hand, to bridge or tunnel the North River from Manhattan Island to

while there is practically a water level from the Hudson to the head of Lake Michigan, through New York State, Northern Ohio and Indiana to Chicago.

From a dream of early statesmanship and a much discussed plan of American cyclists (with very little accomplishment by either) the project has descended to the automobilists of the United States, with

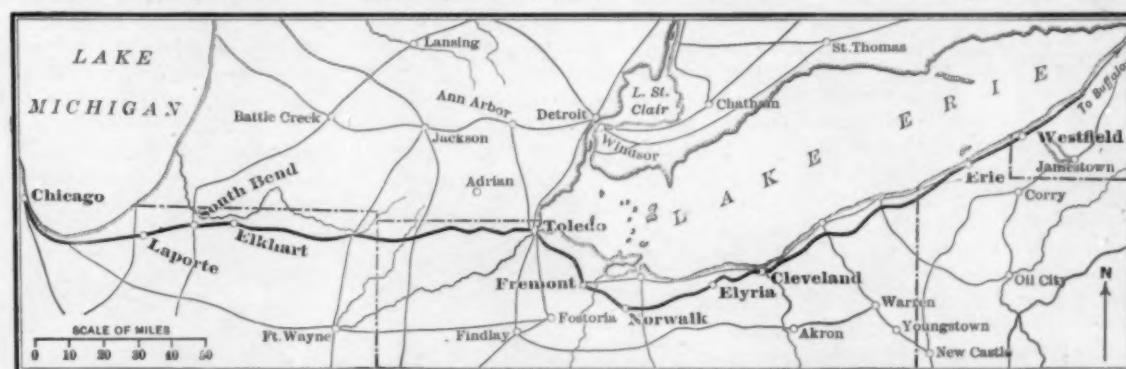


Washington would carry out the good intentions of early statesmanship; but it would necessarily cut off the most important single center of wealth, population and commerce from physical connection with the same. A like objection would hold with Philadelphia and Baltimore, as it would with Wilmington, Richmond or Norfolk.

Not only that, but New England was, for all practical purposes, an Eastern suburb of New York (city and State), and its traffic with the west must cross the Hudson at some point or other. Albany or Troy would be the most nearly in line with

the Jersey shore was not seriously considered for a generation; and in the meantime New England's commerce and travel had already found their way to the West through the Albany and Troy gateways to the Mohawk Valley and through Central and Western New York to Buffalo. To cut out this large and important section from participation in the building and use of any New York-Chicago highway would detract seriously from its "national" character. Equally striking is the fact that almost any available route from Philadelphia, Baltimore or Washington to Chicago would sooner or later coincide with

every prospect that they will be able to command enough influence and sufficient means to put it through, and that in a very few years. The plan of a New York-Chicago highway association was first taken up in 1892, and it grew slowly but surely. The difficulty experienced on the endurance run of 1901, from New York to Buf-



ROUTE OF PROPOSED NEW YORK-CHICAGO ROAD FROM WESTFIELD, N. Y., TO CHICAGO.

New England's largest centers of population, and there, too, the Hudson could be bridged more conveniently and with less expense than at any lower point. Below Albany, excellent ferry crossings exist between

the Buffalo-Chicago line from New York and New England. It must be remembered that between the great cities on the Delaware, Susquehanna and Potomac rivers and the Great Lakes are the Alleghenies,

falo, aroused a great deal of discussion, and shortly after the automobile show in Madison Square Garden in December of that year, a few enthusiasts undertook to organize for the work. A prospectus was

sent out and a popular membership opened, with an annual fee of \$1.00. The disgrace of having a long line of strong motor vehicles, operated by the most experienced chauffeurs in the country, stuck in the mud time and time again between these two American cities, was too much to bear; and the spirit of the automobilists arose in its might to "do things."

THE ROUTE OFFICIALLY FAVORED.

Naturally the first thing was to map out a practicable route; the next thing to arouse interest along the line. To that end an automobile trip was arranged and made by L. C. Boardman, Second Vice-President of the Association, and W. L. Dickinson, Treasurer, Mrs. Boardman and the chauffeur, Mr. George Soules, completing the party. The route followed by them and since that time favored by the association, is from New York by the west side of the Hudson river, through Newburg and Kingston, across the lower tier of counties in New York State, crossing the northwestern corner of Pennsylvania, touching Lake Erie at Westfield, N. Y., and continuing on through Erie, Pa., Ashtabula, Cleveland, Elyria, Norwalk, Fremont and Toledo, O., Waterloo, Elkhart, South Bend and LaPorte, Ind., to Chicago.

With the exception of some localities between Kingston and Binghamton, not figuring on slight detours, there is already the basis of a route from one end of the line to the other. A number of points on the Hudson River make easy connections with the State roads of Connecticut and Massachusetts. Striking west from Newburg or Kingston the first important city is Binghamton. Continuing farther along, the enterprising cities of Owego, Elmira, Corning, Hornellsville, Olean and Jamestown, all in New York State, are intermediate to Westfield, the first point on Lake Erie. Beyond Westfield there is no difference of opinion as touching the route, for it follows the Lake Shore and Michigan Southern Railway to the end.

By this line the distance between New York and Chicago will be shortened at least one hundred and fifty miles over the old route via Albany and the Mohawk Valley. It is not a difficult proposition when it is considered that a great deal of work is already mapped out and that which is planned to be done by each township is only a few miles. That the movement is to be a popular one is shown by the favorable press notices that have appeared in the cities and towns all along the line. For several years there has been a belief that a continuous highway across the lower tier of counties in New York State, beginning somewhere between Newburg and Kingston on the Hudson and continuing through the lake country to the western metropolis would do a great deal to promote touring, by carriage, bicycle and by automobile. Certainly nothing could do so much to develop the territory between the Hudson and the Susquehanna Valley. The people in this district, and in fact in all

the southern counties of the Empire State, feel that a liberal State appropriation for such a work as this would be good public policy. They benefit very little from the enormous sums spent on the State canals (for which they help to pay), while the good roads they ought to have are denied from lack of the necessary appropriations.

It is intended to make the duties and the responsibilities of the New York and Chicago Road Association mainly of an educational and advisory nature, although it is possible that the original plan of keeping aloof from the work of actual road building may be abandoned as a matter of policy. Some sample road building in sections where local enthusiasm might lag, especially in the hill country west of Newburg and Kingston, might turn out to be a valuable object lesson. Anyhow there is a vast amount of organization and not a little preliminary work to be done. But that does not scare the men who have put their shoulders to the project. Believing that the construction of the proposed highway is not only practical but feasible at a relatively small cost when divided among the large number of interests which will (or should) share it, a good working plan is prepared, and it is hoped that results will begin to show in another year.

SIGNIFICANT OF GREATER THINGS.

There is a feeling that the New York-Chicago road will prove to be only a preliminary to the transcontinental boulevard which has been talked of for some years past, but naturally with less prospect of early developments than this one. Such a highway is worth looking forward to as it would be about the biggest thing in America, not excepting the transcontinental railroads. It would be the one great trunk line with which hundreds of connections would be made by local, sectional and State enterprise. The principle is conceded by legislation, and the people would take care of the rest. Road-commerce would be re-established on a new basis in the United States—its unit a short haul to the village or to the railroad, at minimum expense because of perfectly-surfaced roads. Pleasure travel would be beyond all useful comparison with anything the past has known or the present knows. The growing appreciation of the great country beyond the Alleghenies would have one huge enterprise to its credit, beyond human power to erase.

During the automobile endurance run from New York to Buffalo in 1901, to which reference has already been made, it was noticed that the highway lay at times between the New York Central R. R. tracks and the Erie canal. It was remarked at the time by one of the officials of the run that both of these magnificent specimens of engineering represented investments of millions, one by an aggressive private corporation, the other by the State. But the public highway alongside was full of ruts and often covered with water and mud—disgraceful to civilization. From

the standpoint of national enterprise this is all wrong. The automobilists are not against the canal or the railroad but they are in favor of better roads at the same time. And among all the good roads projected in the country at the present time, the New York-Chicago highway is easily the first in importance.

When this work is completed, it—and not the Cumberland road—will be our National highway, because it will begin at the seaboard and connect the chief centers of population and commerce East and West. Once completed to Chicago, it will gain a new impetus in the middle West, and ultimately be carried across the plains to the Rocky Mountains and on to the Pacific Coast. St. Louis, the original western terminus for the government enterprise of 1806-1838, will use this line as it builds northward for a physical connection with it. This will come in time, even as new developments will bring Philadelphia, Baltimore and Washington into better connection with it, somewhere on the south shore of Lake Erie, between Erie, Pa., and Toledo, O. If not a national road in the sense of being built and maintained by the Federal government, it will at least be national in its use and support. Among the possibilities that multiply in the consideration of this work is the possibility that the sparsely settled section of country between the Hudson and the Susquehanna Valley may become, with the help of good roads to our Empire State what New Hampshire is becoming to New New England—a vast national parkland where nature holds forth for all. A patrol system to guard life and property from the reckless and watch for imperfections and breakdowns may even come about in time, adding to the safety of all kinds of travel.

It is significant that, even as I write, Cleveland, O., rather than Pittsburg, Penna., is being favored as the western terminus of the reliability run this fall. This change, practically if not officially made, is not due to a prejudice against the Iron City, or to any underestimation of the value of such a run to the sport and trade of the whole State of Pennsylvania. It is due solely to knowledge of the mountainous country and inadequate hotel accommodations beyond Washington—items which cannot safely be overlooked at this time. The need for a route that will allow a good showing for a fair proportion of the vehicles entered—an advertising point, if you will, but still of vital importance—urges the new and better plan. In time the American automobile builder and operator will be better equipped to overcome these handicaps than they are to-day; and a contest over the route of the old national road will furnish useful lessons along with some thrilling experiences. Before that time, however, these annual reliability contests may well be carried through to Chicago or even to the Missouri River. Incidentally, our maps show the route to Lake Michigan

from Cleveland, which some of the contesting vehicles entered from Chicago may care to follow home after the safe finish of the run.

So the idea has grown from a project to link the capital at Washington to the Ohio River until it accepts the Atlantic seaboard and Lake Michigan as terminals, with longing eyes on the Pacific. There could be no surer proof of our unparalleled national prosperity than the successful completion of such an undertaking, nor any better symbol of the relentless energy of the new good roads movement in this country. Already fairly well assured to Chicago, beyond that it is an interesting possibility of the future.

Preparations for Glenville Races.

Special Correspondence.

CLEVELAND, July 27.—Arrangements for the meet of the Cleveland Automobile Club to be held at Glenville in September are progressing rapidly. A number of requests for entry blanks have been received although the blanks are not yet out. The White Sewing Machine Company is building two new steam flyers especially for the race. It is understood that they will be large machines, designed to beat anything in their class. Otto Konigslow is building a light racing machine. George Collister, who is in charge of entries states that Hedges will be here with the machine he built for the Gordon Bennett race, and that Paul and Roy Rainey with 60-horsepower Mercedes, W. K. Vanderbilt, L. P. Mooers, Mathewson of Grand Rapids, H. S. Harkness, Percy Owen and Alexander Winton are among the other applicants. Clevelanders are very anxious to see what the Gordon Bennett contestants can do on a home track—and with their own gasoline.

He—"Those De Jorkinses have a plate glass front to their auto."

She—"Plate! Goodness knows those girls are homely enough for three thicknesses of ground glass!"

Home for Pittsburg Automobile Club.

Architects' designs have been approved and contracts let by the board of directors of the Pittsburg Automobile Club for a handsome clubhouse. The whole structure will be devoted exclusively to the purposes of the club, which has taken a

contain a meeting room, committee room, lounging room, a women's parlor, grill room, kitchen, lavatories, men's lockers and shower baths. The ground floor will be utilized as a club garage, in which a charging plant for electric machines will



MERCEDES LEADING THE DECAUVILLE IN 15-MILE MATCH RACE AT YONKERS.

ten-years' lease on the property from April 1 next and will furnish the rooms in a luxurious style expressly for its occupancy.

The building will be located in the fashionable East End at the intersection of Baum and Beatty Streets, convenient to the residence section of the city and close to the three automobile repositories maintained by Bunker Brothers, the Seeley Manufacturing Company and the Pittsburg Automobile Company. A new one-story building, erected as an automobile garage for the Seeley Manufacturing Company by the owners of the property, stands on the premises now and is to be used as the first or ground story of the proposed new clubhouse, a second story being built onto it. This second floor will

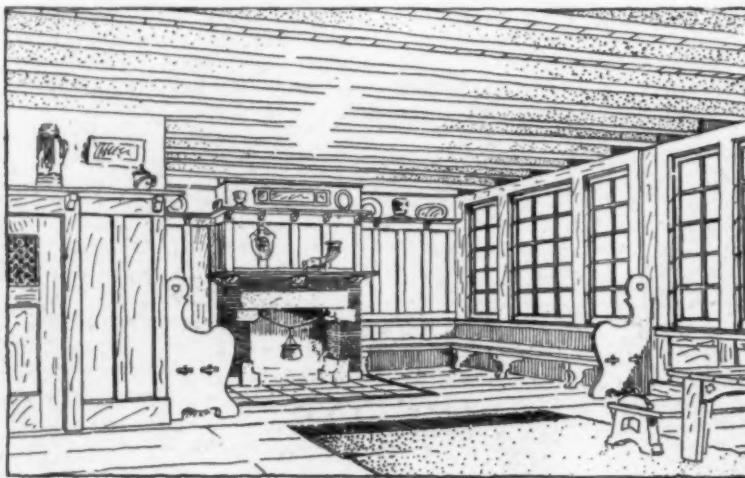
be installed. The building will be of irregular shape, standing on a plot between two converging streets and measuring 76, 74, 52 and 16 feet respectively on the four sides. As the building will have an exposure upon streets on three sides and the design contemplates large windows on all three sides, there will be a superabundance of light even on dark days, both in the club room and in the garage. The owners will spend \$10,000 on the improvements. The interior decorations are to be handsome and in a style befitting the purposes of the building. The work of construction is to be pushed and the club hopes to occupy the building before the midwinter holidays.

The Pittsburg club holds the record among automobile organizations for rapid-



CROWDED GRANDSTAND AND LAWN AT AUTOMOBILE RACES, EMPIRE CITY TRACK, YONKERS, N. Y.

ity of growth and the display of energy. It was organized only last January and incorporated in May, yet it now has nearly 200 members, whose number is growing at the rate of about thirty or forty a month. The entire matter of securing club quarters was put in charge of a committee consisting of Reuben Miller, Jr., W. Linwood Smith, W. L. Elkins and George L. Hail-



man. The list of officers of the club is as follows: President, George H. Flinn; Vice-Presidents, W. C. Temple; D. Herbert Hostetters and James Francis Burke; Treasurer, Reuben Miller, Jr.; Secretary, W. Linford Smith; Membership Committee, Reuben Miller, Jr., W. H. R. Hilliard and P. J. Eaton.

Although this is the club's first season of existence, it has already promoted a successful hill-climbing contest and mile speed trials, and is now planning pursuit races and an endurance run. The endurance run is to be held the first week in August, over a distance of about 86 1-2 miles, with Butler, Pa., as the objective point. The route will be over different roads going and returning. Maximum and minimum speed limits will be fixed, and those exceeding them will be disqualified.

The pursuit races, on the Australian plan of starting the competitors at equidistant points around the track are to be held about two weeks after the endurance run. The use of Buntos I land track, one of the best mile race courses in the country, has been tendered to the automobile club by President J. G. Bennett, of the Matinee Club.

The Pittsburg Automobile Club is greatly interested in the proposed reliability run of the National Association of Automobile Manufacturers to be held this fall, and should Pittsburg be made the finishing place the participants in the run would be royally entertained.

Referee in Bankruptcy William H. Hotchkiss last week sold the plant of the Buffalo Spring & Gear Co., in Buffalo, to the Bank of Buffalo for \$48,100, subject to a mortgage of \$19,000.

Touring in the Middle States in a Light Gasoline Runabout.*

BY J. WALTER SCOTT.

Hicksville was reached about 8.30 o'clock and while making inquiries as to the roads to Fort Wayne, I was told that

fact that they had telephoned her husband, who was in a neighboring town, and he replied that he did not think it was "any worse than her usual spells," and he would be down in the morning. He had not yet arrived.

However, the sentiment in this town was that the owner of the big car had been inconsiderate in his driving, not only in this particular instance, but in others. Likewise the owners of other big cars that had come out of Fort Wayne.

Subsequently on the tour I learned that this sentiment was general in small towns and in the rural districts. Why a man owning a large car should be less considerate than one owning a small one, I can't explain, but this is a fact if reports of the townspeople can be believed.

From Hicksville to Fort Wayne as far as the eye could reach ahead showed a smooth white road and I flew along, reaching the city about 10.30 o'clock.



GRILL ROOM AND EXTERIOR OF PROPOSED PITTSBURG CLUBHOUSE.

the evening before a man from the latter place with "a big red car" had frightened a horse and it ran away. The woman driving it was not injured physically, but had been so frightened that she was hysterical all night. What might have been a tragedy was made a comedy by the

Stopped at the hotel for my mail and thence to an automobile store to make inquiries about getting out of the city.

Passing from the streets of a city, even a small one, and coming out on to the proper road is seldom easy without very good directions. I found the streets very much cut up from repair work and I was

*Continued from the issue of July 25.

glad when I reached the open country. And then my directions were easily followed. "Don't lose sight of the telephone line." Of course there were branch lines, but they could always be distinguished by the fact that such poles carried a less number of wires.

This was a very happy direction because, otherwise, keeping the main road would have been a difficult matter without frequent stops to make inquiries. The road winds constantly with numerous branches and cross roads and all seemingly as well traveled. The road was not so good as it had been but good enough, so that I still made speed and rolled into Roann before noon for luncheon. While oiling, before leaving, I discovered that the union between the gasoline tank and carburetor was leaking. I thought some red lead and tire tape might stop the leak and sought a bicycle repair shop. The proprietor was certain that a mineral cement, I believe he called it, would answer and I let him have his way.

From Roann to Huntington the surface of the road is good but it is a series of winding hills. At one stream there was a bridge out. The workmen said I could ford the stream, but they did not think I could climb the steep bank on the other side. They would pull me up with a team if I stalled. I made it without any trouble, to their wonderment.

When I reached Huntington I stopped at a livery stable to inquire the way out of the city. Again the road was good, but winding, with many hills, most of which could be taken on high speed. About five miles out I was stopped by a man wearing an automobile cap and walking in the highway. He wished to know if I had noticed on the roadway a piece of small brass piping. To my offer of assistance, he replied I could do nothing, he must find the lost part and he continued his search over the way I had come. About two miles farther on, I came to his runabout stranded by the roadside.

A little later I met a man driving a mule team hitched to a wagon with hay ladders. I slowed down as I always do when meeting a team, but as the owner made no sign I did not stop. When opposite the team the mules shied. In all my experience in cycling and automobiling I have never passed a mule team that did not shy, but that is the extent of it, they never frighten enough to attempt to run away as many horses do. Well, this particular driver immediately became very angry and also abusive, while inquiring why I had not stopped. I replied that I always stopped when a man gave any sign that he thought his team would be frightened, but when he did not I considered that he was driver enough to know his team and went ahead, for as it was I had to stop often enough.

He should have been thrashed, but such methods on the part of automobile



STARTING FROM INDIANAPOLIS FOR THE TRIP SOUTH IN NORTHERN RUNABOUT

tourists would only make the prejudice greater.

As I drove on I reasoned a bit, and thought how really unjust the drivers of horses are. They only meet, perhaps, one automobile a day, maybe a week, and it would not be so very much trouble for them to get out and hold the teams while the automobile tourist meets probably fifty teams a day, yet they expect him to come to a full stop each time.

When a driver has a horse he knows to be fractious, you would think common-sense and prudence would prompt him to get out and hold the horse while you pass, but it doesn't occur to him. Instead he gathers in the slack of the lines, gets nervous himself and by the way he handles the lines, makes the horse aware that he feels something out of the ordinary is going to happen, and the horse immediately takes the cue from the driver and becomes frightened. When the meeting takes

place, the horse usually commences to back and then the driver is absolutely helpless and the chances are good for a wheel being turned down if the vehicle doesn't upset. If the driver did not want to go to the trouble of getting out, he could turn his team around, as soon as he noticed the approaching automobile, so that they would face away from it, then if the team attempted to run when it came up he would have a fair chance to hold them, and once the automobile had passed they would naturally stop. But in all my experience, I have never met but two drivers who, if they thought of this plan, which would seem to be obvious, were reasonable enough to put it into practice. One of these was a woman.

Reaching Wabash, I crossed the bridge over the river by that same name, the Wabash River, "whose banks far away" have been told about in song, and ran to the center of the little city for directions.

Learned that I must retrace my way across the river and then follow the Interurban electric line for most of the way to Peru. The road was bad in some places and only fair at the best, but I reached Peru at 4 P. M.

I was feeling a bit hungry so took a hasty lunch at a place where you sit on a high stool and the menu is limited to about four articles. Here I was told that about five miles out I had better take the road along the old canal bed, and did so. Afterwards I was sorry for the other could not have been much worse. It was so narrow that I was constantly wondering what would happen if I met a team. Luckily this did not occur.

As I was passing a little farm house, out rushed a woman shrieking frantically for me to stop. I pulled up hastily and inquired why I should stop. She informed me her horse was tethered in the roadway to graze. I flattered myself that I am usually deferential to the fair sex but I had been sorely tried this day. I fear there was a shade of irony in my tones when I inquired if she expected me to wait there until it was time for her to put the horse up for the night. Perhaps it occurred to her that this was a bit unreasonable so she ran down the roadway and I noted that she was barefooted. She had to take the horse over on the right of way of the electric rail road where he paid absolutely no attention to the automobile as I passed. Close proximity to the trolley line had rendered him immune to fear.

A little later in trying to climb a very high hill on the high speed I delayed throwing in low speed a bit too long and "killed" the motor. A double-acting brake prevented the automobile from dashing backwards down the hill, but it brought the thought to my mind of what I should do if, under the same circumstances, I had stalled with an automobile that did not start from the seat. One would have to hold the foot lever brake with his hand while he climbed out and dug a stone out of the road way with his toe and pushed it under a wheel to block it while he started the motor. Or he would have to sit in the auto until some one came along to block a wheel for him. Of course, all the big modern cars have an extra emergency brake for this and other purposes.

A few miles farther I stopped to oil up, for I had made a point of oiling at every thirty-five miles, especially where the roads were hilly. When I attempted to start the motor I found that a pin had lost out and I could not do so. To attempt to find a small article like that in a dusty road would have been a useless task. It was a taper pin which would have rendered the making of one out of wire nail, by filing, impossible, had the farmer near by possessed a file, which he did not.

I had already come 140 miles since morning, but with Logansport only five or six miles away there was nothing to do but to get the farmer to tow me in. He

did not have any rope but I thought of the clothes line. He hitched a horse to a light buggy. I tied one end of the clothes line to his rear axle, the other to my front axle with about fifteen feet leadway. A little more than is necessary in the day time; it was getting dark. And we started.

It soon developed that the horse could not or would not walk over two miles an hour, even the whip could not improve this gait. And finally the farmer explained that the horse was not shod and the gravel of the road hurt his feet. We were nearly three hours going the five or six miles and it became so dark that I could barely distinguish the white clothes line and note when it slackened to prevent running into the buggy on the slight inclines as the horse faltered from time to time.

When we reached the city it was too late to do anything but go to bed. I paid him

I had obtained my directions from the liveryman and contrary to my usual methods had neglected to verify his report of the roads by inquiries of others. He had said that the first ten miles to Deer Creek were not so very good but after that the roads were fine. I again crossed the Wabash River and as soon as I left the bridge found the road bad. It had been a good broad pike, but had been permitted to fall into bad condition until there were holes in it that you could have buried a horse in without making any extra excavation. The farther I went the more numerous the holes and ruts became until dodging them became an impossibility, and one just had to crawl along to remain in the seat so violent was the jolting.

At length when my patience was about exhausted, I came to a horse hitched to the fence opposite a farm house. Out rushed a young man who from his attire I was certain was a physician. He ran to the horse to hold him, but I saw by his manner that he was afraid of the horse. My supposition was correct for he held the horse in such a gingerly manner that as I passed on low speed, the horse broke a good hitch strap but did not run away.

Finally I rolled into Deer Creek, a village of a few hundred inhabitants, a majority of whom soon surrounded my vehicle. They confirmed the liveryman's report that the roads from there on were good. They were really fine, emphasizing the fact that bad roads are simply the result of bad or no management on the part of the people, for the soil and other natural conditions from Logansport to Deer Creek are just the same as from Deer Creek to Delphi.

(To be Continued.)

Minneapolis Club Run.

Special Correspondence.

MINNEAPOLIS, July 26.—The first country run of the Minneapolis Automobile Club yesterday was participated in by only six machines, the threatening weather of the morning keeping others away. The machines were to have started in three classes. Dr. A. A. Law started at 9.30 o'clock, and W. E. Wheeler, in a Knox, fifteen minutes later. H. E. Partridge rode his Olds and W. Y. Chute a Rambler. Others were R. E. Stoddard and W. M. Andland. The route was through Wayzata, Lake Minnetonka, to Mound City. It was the original intention to take dinner at Excelsior, but at Mound the plain was abandoned, and the motorists separated. Some returned directly to the city, while others visited other points at the Lake.

The roads were in excellent condition as the early morning rain had settled the dust.

Rhodes Bros., of Paoli, Ky., who have the contract for delivering the mails for the coming year between Paoli and New Albany, Ky., are considering the practicability of using an automobile.



ROUTE OF THE TOURISTS.

Yonkers Auto Races.

(Continued from page 100.)

American trailing the Decauville. For a time the Peerless picked up in speed and slightly reduced the lead the Frenchman had over it, and again in the tenth mile, as the Mercedes came up behind and tried to pass, Wridgway seemed to let out an unexpected link and staid ahead. With the smoothness and quietness for which the German car is noted, and taking the turns as well as the straights close to the pole while the assistant mechanician stood on the step and leaned far out of the car toward the inside of the track, the Mercedes followed its orbit without the slightest deviation. Eleven miles were finished in 11:56, and Albert C. Bostwick's record of 14:02 2-5, made on the same track on October 8, 1901, went by the board. The time for twelve miles was 12:59 4-5, and Bostwick's record of 15:21 was wiped from the slate forever. Thirteen miles was finished in 14:03 4-5, against Bostwick's 16:38 4-5, and the wealthy sportsman had nothing left to his credit. Completing fourteen miles in 15:07 2-5, Grosso wiped out the figures of 17:55 3-5 put up by Henry Fournier at Fort Erie, Can., on September 26, 1901, and when he finished the race in 16:10 2-5 he was 3 minutes 2-5 seconds inside of Fournier's Fort Erie record of 19:10 4-5.

The time for the Decauville was caught at 16:54 4-5. Wridgway did not finish at speed.

The special race for 24-horsepower Panhards was declared off because the only one of three cars entered that appeared for the event was that of C. V. Brokaw.

Four starters appeared for the ten-mile race open to machines of any motive power weighing less than 1,800 pounds.

AT THE WHEEL OF A WHITE STEAMER IN THE PADDOCK.

These were J. Insley Blair's 35-horsepower Panhard, driven by Joseph Tracy; a 40-horsepower Darracq driven by Jules Sincholle; the American Darracq Automobile Co.'s 35-horsepower Darracq driven by George Papillon; and the 40-horsepower Decauville car driven by Henri Page in the fifteen-mile match race. Although the Decauville and Panhard got away best, the 40-horsepower Darracq soon showed its superior speed and, overtaking the leaders, went to the front entering the home straight in the first mile and continued to widen the gap to the end of the race, which it won by half a mile in the record-breaking time of 10:52 4-5, or at the average speed for the ten miles of 1:05 1-5. The excellent running of the Darracq was something of a surprise, and it made a pretty win. The real race, however, was between the Decauville and the 35-horsepower Darracq

handled by Papillon, for second place. They were almost perfectly matched and were both well handled and staid close together throughout, the Decauville about 100 feet in the lead, which it held to the finish. The time for the Decauville was caught at 11:26, and that of Papillon at 11:33 4-5. The Panhard driven by Tracy labored around with one cylinder practically idle owing to a defect that developed in the spark coil for that cylinder. Tracy was lapped in the seventh mile at the end of the backstretch, and was almost lapped by the Decauville at the end of 15 miles.

F. A. LaRoche had agreed to meet Barney Oldfield in a five-mile match race, best two in three heats, intending to use a 70-horsepower Darracq racing car that was expected to be received from abroad. The machine failed to arrive in time, however, so LaRoche, with true sportsmanship, went into the race with the 35-horsepower car which Papillon had driven in the preceding event. Although realizing that he did not stand the ghost of a chance to win, he pluckily went to the slaughter, and made a good showing, especially in the second heat, in which his time for the five miles was 5:13 3-5. Oldfield started from the wire in both heats, and LaRoche from the opposite side of the track. Oldfield got a bad start in the first heat and stopped before finishing the first lap, a spark coil screw having become loosened on his car. The second start was a better one, though this time LaRoche was slow in getting away. Oldfield moved slowly in the first mile but rapidly gained on his opponent, finishing the mile in 1:11 3-5, with a lead of nearly a quarter of a mile. Coming down the straight in front of the grandstand in the second mile he drew his handkerchief from his pocket and wiped the oil and dust from his face, although going at a rate of nearly a mile a minute. The second mile was finished in 2:12 2-5. The third mile was done in precisely one minute, the fourth in 58 3-5, and the fifth in 58 4-5. The total time for the five miles was 5:09 4-5. Oldfield followed the same



TWO IS COMPANY.—On the Lawn in Front of the Grand Stand.

tactics in driving as in the record trial, keeping close to the fence in the straights and cutting into the pole on the turns. Each time he made the turn out of the home straight he tore up a solid wave of dust that rolled up and settled over the onlookers in front of the clubhouse, who each time ran back to avoid it. Each time, too, as he drove down the long straight he leaned far over from his seat and looked down or back, first on one side of the car and then on the other. He lapped LaRoche in the turn into the home straight finishing the third mile, and won by more than a mile, LaRoche's time being 6:18 1-5.

The second heat of the match, run after the fifteen-mile open, was an exhibition of far greater speed on the part of both cars, though Oldfield's victory was as great. Barney gained a third of a mile in the first lap, which was done in 1:02 2-5 from standing start. Two miles were done in exactly 2 minutes, three miles in 2:58 3-5, four miles in 3:56 1-5 and five miles in 4:55 flat—only two-fifths of a second slower than the record made by Oldfield in his ten-mile record-breaking trial at Columbus, on July 4. LaRoche was overtaken and passed in the fourth mile as he was passing the grandstand, which raised the enthusiasm of the spectators to top doctch. His time was 5:13 3-5.

Oldfield was given a great ovation at the conclusion of the race, and hundreds of spectators rushed down to the track to shake hands with him.

A VICTORY FOR THE DECAUVILLE.

The Decauville made a consistent win in the fifteen-mile race for machines of any weight and power, the Oldfield machine barred. The starters were C. G. Wriggway, in the big Peerless racer; Sincholle, in the 40-horse Darracq; George Papillon, in the 35-horsepower Darracq; Henri Page, in the 40-horsepower Decauville, and F. Froger in M. C. Herman's 70-horsepower Panhard. The Panhard led all through the first mile, with the Decauville and the two Darracqs bunched as they crossed the tape. Wriggway dropped out in the second mile and Sincholle gained on Froger in the Panhard and on the turn into the back-stretch in the third mile passed into the lead, while the Decauville also passed the Panhard as they entered the last turn. At the end of the third mile the Panhard quit, owing to the breaking of an exhaust valve spring. At the end of the fourth mile Sincholle led by 150 yards, with the Decauville second and the 35-horsepower Darracq nearly 200 yards back in third place. It was noticed then that something was the matter with the tire on the outer rearwheel of the leader. It appeared to be coming off. This increased rapidly as the race continued, and the tire could be seen flapping on the rim, and a noise heard as if the lugs were hitting the rim. The driver was apparently oblivious of the condition of the tire, and for a time it looked as if an accident might result. The machine fell off in

speed and rapidly lost the lead, which was taken from it at the end of the sixth mile, when the Decauville passed it at the wire. The Decauville gained a long lead in the seventh mile and steadily increased it to the end of the race, while it won in 16:39 2-5. Papillon passed Sincholle and went into second place in the ninth mile, but was himself lapped in the thirteenth mile by Page in the Decauville. Papillon's time was 18:18 4-5, and Sincholle's 19:00.

When Sincholle brought his car to a stand at the wire and the defective tire was examined it was found to be perfectly hard and secure on the rim, but a section of the rubber tread had torn loose and had been flopping about.

MILE TRIALS AGAINST TIME.

The final event was the mile trials against time for all machines. These were uneventful except for the breaking of one of the sections of hose leading from the top of the radiator to the cylinder heads. This

Roche Co.'s (12 h.p. La Roche) 3rd, time 8:11 3-5. J. C. Robbins (Waltham Mfg. Co.'s 4-h.p. Orient) Leader's time by miles, one mile, 1: 25; two, 2: 46 4-5; three, 4: 08 2-5; four, 5: 30 2-5; five, 6: 54 2-5.

One-mile exhibition trial against world's record: Barney Oldfield (Ford-Cooper 80-h.p. racer), time, :55 4-5, breaking world's record of :56 2-5 made at Columbus, Ohio, by three-fifths of a second. Intermediate times, quarter :15, half :28, three-quarters :41.

Ten-mile match race: John Wilkinson (Franklin Mfg. Co.'s 10-h.p. Franklin) 1st, time, 15: 15 1-5; Joseph Tracy (J. Insley Blair's 10-h.p. Renault) 2nd, time, 17: 07 4-5; Tracy ran most of the race on one cylinder, the other missing fire. Won by a mile. Leader's times by miles, one mile, 1: 27 3-5; two, 2: 54 4-5; three, 4: 23 4-5; four, 5: 51; five, 7: 25 4-5; six, 9: 03 4-5; seven, 10: 14 3-5; eight, 12: 15 3-5; nine, 14: 48 4-5; ten, 15: 15 1-5.

Three-cornered match at fifteen miles: Laurent Grosso (O. W. Bright's 60-h.p. Mercedes) 1st, time, 16: 10 4-5; Henri Page (J. R. Chisholm's 40-h.p. Decauville), 2nd, time, 16: 54 4-5; C. G. Wriggway (Peerless Motor Car Co.'s 80-h.p. Gordon Bennett racer), 3rd. Winner's times by miles, one mile, 1: 10 2-5; two, 2: 14 4-5; three, 3: 19 3-5; four, 4: 23 4-5; five, 5: 28 2-5; six, 6: 33 3-5; seven, 7: 38 1-5; eight, 8: 43 1-5; nine, 9: 47 2-5; ten, 10: 51 3-5; eleven, 11: 58; twelve, 12: 59 4-5; thirteen



M. G. HERMAN'S 70-HORSEPOWER PANHARD, F. FROGER STEERING.

occurred in the warming-up circuit, when Wriggway and his assistant were observed to throw their arms up to protect their faces from the flying spray. They pluckily kept on, however, and made several circuits of the track with the hot water flying in their faces and drenching them almost from head to foot. In this, as in the previous events, Wriggway displayed commendable determination in the face of great odds. His time for the mile was 1:09 3-5. The times of the other contestants were as follows: O. W. Bright's 60-horsepower Mercedes, 1:03 1-5; M. C. Herman's 70-horsepower Panhard, 1:05 2-5; Societe Decauville 40-horsepower Decauville, 1:07 1-5; 40-horsepower Darracq, 1:15 2-5; 10-horsepower Franklin, 1:20 2-5.

THE SUMMARIES.

Five-mile, open to machines of all powers weighing less than 1,200 pounds: John Wilkinson (H. H. Franklin Mfg. Co.'s 10-h.p. Franklin) 1st, time, 6:54 3-5; L. O. Gitchell (Col. W. P. Harlow's 16-h.p. Darracq) 2nd, time, 8:06 4-5; F. A. La Roche (F. A. La

Roche Co.'s 12 h.p. La Roche) 3rd, time 8:11 3-5. Tieing five mile record made by Oldfield on same track last Decoration Day, breaking Bostwick's records for eleven to fourteen miles and Fournier's record of 19:10 4-5.

Ten-mile open race for machines of any motive power weighing less than 1,800 pounds: Jules Sincholle (40-h.p. Darracq), 1st; time, 10: 52 4-5; Henri Page (Societe Decauville 40-h.p. Paris-Madrid Decauville), 2nd; time, 11: 26; George Papillon (Am. Darracq Auto. Co.'s 35-h.p. Darracq), 3rd; time, 11: 33 4-5; Joseph Tracy (J. Insley Blair's 35-h.p. Panhard), fourth. Winner's time by miles, one mile, 1: 13 4-5; two, 2: 17 1-5; three, 3: 21 1-5; four, 4: 25 2-5; five, 5: 29; six, 6: 32 4-5; seven, 7: 37 1-5; eight, 8: 41 3-5; nine, 9: 47; ten, 10: 52 4-5.

Five-mile match, first heat: Barney Oldfield (Ford-Cooper 80 h.p. racer), 1st; time, 5: 09 4-5; F. A. La Roche (La Roche Co.'s 40-h.p. Darracq racer), 2nd; time, 6: 18 1-5. Won by more than a mile. Oldfield's time by miles, one mile, 1: 11 3-5; two, 2: 12 2-5; three, 3: 12 2-5; four, 4: 11; five, 5: 09 4-5.

Fifteen-mile open, for machines of any weight and motive power, Oldfield and La Roche machines barred: Henri Page (Decauville 40-h.p.), 1st; time, 16: 39 2-5; George Papillon (Am. Darracq Auto. Co.'s 35-h.p. Darracq), 2nd; time, 18: 18 4-5; Jules Sincholle (40-h.p. Darracq), third; time, 19: 00. Leader's time by miles, one mile, 1: 10 1-5; two, 2: 17 1-5;

three, 3: 22 4-5; four, 4: 29; five, 5: 36 3-5; six, 6: 46 1-5; seven, 7: 51 4-5; eight, 8: 58 2-5; nine, 10: 04 1-5; ten, 11: 10; eleven, ——; twelve, 13: 21 3-5; thirteen, 14: 27 2-5; fourteen, 15: 33 1-5; fifteen, 16: 39 2-5.

Five-mile match race, second heat: Barney Oldfield, 1st; time, 4: 55; F. A. La Roche, 2nd; time, 5: 13 3-5. Oldfield's time by miles, one mile, 56 3-5; two (1: 03 2-5) 2: 00; three (: 58 3-5) 2: 58 3-5; four, (: 57 3-5), 3: 56 1-5; five (: 58 4-5), 4: 55.

One-mile trials against time: F. Froger (M. C. Herman's 70-h.p. Panhard, 2,400 lbs.); time, 1: 05 2-5; Julius Sincholle (40-h.p. Darracq), time, 1: 15 2-5; John Wilkinson (10-h.p. Franklin, 900 lbs.); time, 1: 20 2-5; Laurent Grosso (O. W. Bright's 60-h.p. Mercedes); time, 1: 03 1-5; C. G. Wridgway (Peerless 70-h.p. Gordon Bennett racer, 2,200 lbs.); time, 1: 09 3-5 (broke hose to radiator); Henri Page (40-h.p. Decauville Paris-Madrid racer, 1,430 lbs.); time, 1: 07 1-5.

Notes of the Meet.

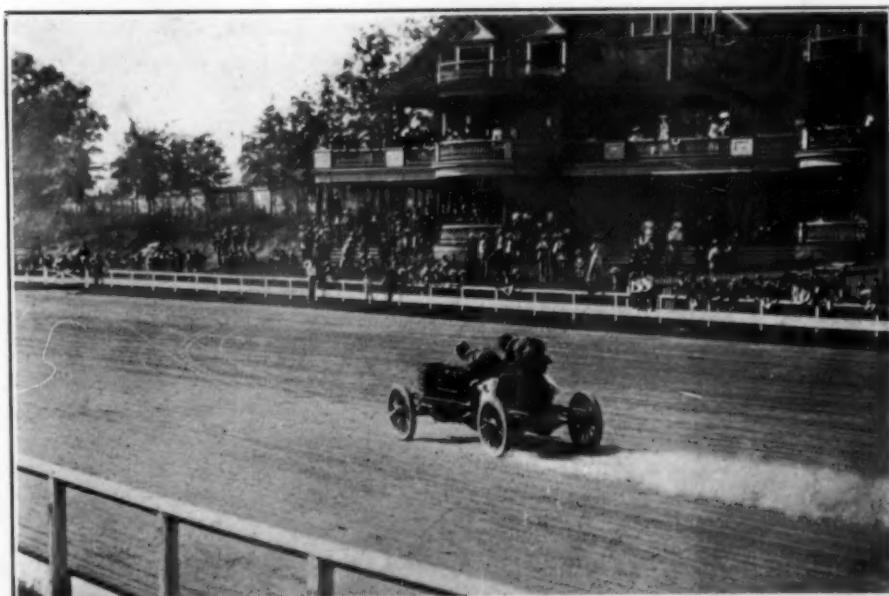
It was an ideal day for the races, an unclouded sky, warm, but with the heat tempered by a gentle south wind.

The track was in fair condition but the track manager averred that if it were not necessary to keep it soft for the horses he could put it in perfect condition for automobile racing in short order.

Visiting automobiles began arriving shortly after 1 o'clock, and soon there was a procession of gasoline vehicles of all styles hurrying up the long grade leading to the grandstand and clubhouse, and down to the beautiful lawn sloping to the edge of the track, where more than 100 cars congregated and were the center of attraction until the races began.

There were not more than half a dozen lever-steered vehicles on the lawn, wheel steering evidently being much in favor. Cars with vertical motors were also much in evidence. Foreign and domestic machines were nearly all of tonneau type, whether the motor was vertical or horizontal.

Before the first race, which was called shortly after 2:30 P. M., the track was dragged with a brush sweep and sprinkled



WRIDGWAY DRIVING GORDON BENNETT PEERLESS RACER PAST CLUB HOUSE.

by two watering carts. Between two of the races, later in the day, the two watering carts, each drawn by a team of weary-looking horses, came lumbering down past the grandstand at a dog trot. The crowd, eager for an opportunity to laugh, called for a race and there was great tooting of automobile horns and enough shouting of encouragement to please the most exacting competitor.

The day was trying for an air-cooled motor, but the Franklin engine ran with the utmost regularity at high speed. It evidently did not become overheated, nor did it miss a single explosion.

When the announcer megaphoned Oldfield's announcement that he was going to Europe next season to compete in the international races, and that he did not use Russian gasoline and would not be left at the post, the big Peerless machine,

itself a Gordon Bennett competitor, which Wridgway was starting at the side of the track, gave an unmistakable grunt of apparent satisfaction.

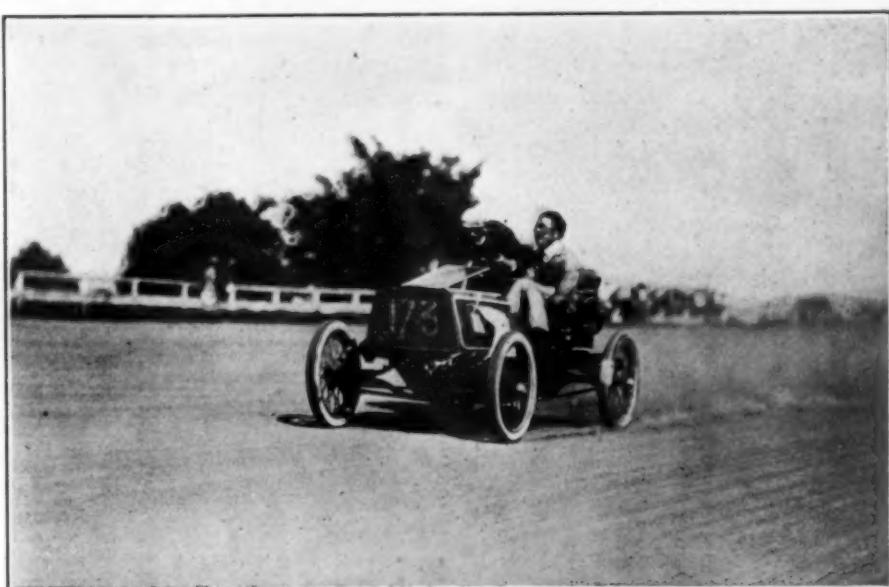
The races, held under the sanction of the American Automobile Association, were conducted by an efficient and representative board of officials, the members of which were as follows: Referee, A. R. Pardington; judges, George Isham Scott—in whose absence Albert C. Bostwick was substituted; A. G. Batchelder, Lawrence Arbabam, C. Arthur Benjamin; timers, Frank G. Webb, M. J. Budlong, Roland Douglass, Robert Stoll; clerk of course and starter, A. J. Picard; assistant clerks of course, P. J. Fisher, K. C. Darling; umpire, Frank Eveland; announcer, Peter Prunty.

No Deauville Races.

There will be no race meeting this year at Deauville, France. The mayor of Deauville, when asked if permission could be secured for a series of races between Deauville and Villers, intimated that the authorities would not allow them. Now that automobiles have attained such power and speed, it is generally admitted that the Deauville course is hardly long enough, the terrace extending for not more than one mile, leaving little distance in which to start and stop when covering the measured kilometer.

The American Motor League estimates that the number of automobiles in use in the United States amounts to about 51,000, and is increasing at the rate of about 1,200 to 1,500 per month.

Owing to the fact that the city council of Toledo, O., has neglected to authorize the city auditor to purchase license tags to sell to automobilists, the ordinance recently passed providing that each automobile in use in the city must be licensed and tagged is as yet inoperative.



JULES SINCHOLLE, WINNING 10-MILE RACE IN 40-HORSEPOWER DARRACQ.

How It Feels to Drive Under the Minute On a Circular Track.

Few automobilists, the world over, can claim the distinction of breaking a world's record in their first race. This is what Barney Oldfield accomplished on the Grosse Point mile track in Detroit last October. It was in the Five-Mile Race for the Manufacturers' Challenge cup that Oldfield made his debut. He had for company on the track, Alexander Winton in the Winton "Bullet," W. C. Buckman in the Geneva steam racer and Charles Shanks in the Winton "Pup."

Only three days before, Barney Oldfield had sat in an automobile for the first time in his life, making a few practice miles in the Ford-Cooper racing machine on October 23, and following this up the next day with an exhibition mile in 1:06 4-5. In the five-mile event in competition, Oldfield drove the first mile in 1:07, covered one of the intermediate miles in 1:04 1-5—then a world's record—and traveled the distance in 5:28, tying Winton's record made the day before.

Thus from an unknown in the automobile racing game, Barney Oldfield leaped into the front rank, and has kept there ever since, always ahead of the procession. One day's automobile driving brought him more fame than eight years of bicycle racing.

Road racing as practiced in Europe is unquestionably much more dangerous work than track racing as followed on this side of the Atlantic, when machines of the same type are used. Great, however, as is the nerve displayed by some of the foreign drivers, it is doubtful if they would consent to change places with Barney Oldfield and sit in a machine which is simply an automobile by courtesy. Technically the "Red Devil" driven by Oldfield, is an automobile, practically, it is an engine on four wheels, a machine in which brute strength, and a disregard for nearly all the essentials of modern automobile construction are embodied. Without differential, without non-reversible steering, and with even no springs for the rear axle, its 80-horsepower turned loose would carry the average skilled automobilist to destruction in almost the twinkling of an eye. Absolute fearlessness, clear headedness and a strong muscle in the person of Barney Oldfield, carries this monstrous freak around the track in less than a minute.

Such trips must be productive of sensation, however well they are masked by the driver before the excited thousands at the race track. These sensations were discussed by Oldfield in a conversation after the races at Yonkers: "If you have ever ridden down a toboggan slide, or taken a shoot-the-chute ride, you will perhaps have experienced a

queer feeling about the waist belt on the way down. Well, you have that same 'gone' feeling all the way 'round the track when you get to going under the minute, and a lot of other feelings too.

"The wind, of course, makes a terrible roar, and the car whips and bounds under you like a live thing. It's funny about me; I can't drive slow.

"There is an exhilaration in driving fast that I cannot resist; it is like intoxication. I take out one of our two cars for a practice run with the intention of going about a 1:05 clip, and I can't keep from hitting it up; they time me under the minute nearly every time.

"Perhaps you have ridden in bicycle races?" he inquired.

"Yes."

"Well, have you not sometimes found yourself winning when you knew you were riding every last ounce you had in you and still felt like yelling?"

"That's what it is like when I get going under the minute.

"It doesn't thrill me a bit to drive a 1:05 clip, and though I might win races without having to drive under the minute, I just have to let it out to get another thrill. I tell you it is living to feel that thrill. You just clamp your teeth on your cigar and get down to your work so that you know to an inch how much the car will swing on the turns, and you get more fun out of the ride than a whole stand full of people.

"I haven't any mania for speed, and I don't lose my head and do the mad-man act or anything like that, but I do like to feel the car jump and feel the power of being able to guide the machine so nicely, no matter how quick the turns come. The car skids about fifteen feet on the turns; the front wheels slide as well as the rear wheels.

"My car is so well balanced and I know it so well, that I know just how to take those slides. If I didn't know I wouldn't be here to tell you about it. A little too much turn of the front wheels would throw the back wheels out so far that the car would not right itself; then there would be something doing.

"No, I don't expect any one will take the records away from me this year. You see I race every week and am on the track so much that I am constantly getting to know my machine and the tracks thoroughly. No other driver is in the same position.

"The tracks are all controlled by horse associations and have been bauked for an extreme speed of 2 minutes. Such tracks are as unsuited for automobile racing as an old-fashioned strap iron railroad would be for a modern express train.

"I think that the mile will eventually

be covered in 50 seconds on some one of our horse tracks, but the man who attempts to do better than 50 seconds won't live to tell about it.

"I am always willing to race any man who can race. I don't ask for anything but a race; I don't specify any particular track or require a lot of agreements or any of that sort of thing. If any man has a car and wants a race he can get one from me, for I am ready to race any old man on any old car at any old time on any old track."

And his manner and the tone of his voice gave one the impression that he isn't one of "the-race-that-won't-come-off" sort.

AWARDS OF PRIZES IN PITTSBURG SPEED TRIALS.

Special Correspondence.

PITTSBURG, July 25.—The committee of the Pittsburg Automobile Club having charge of the automobile races against time on the Beechwood boulevard speedway on July 11 met to-day and passed upon the protests and made awards in the several events. The committee consists of W. C. Temple, chairman, George W. Hailman, Reuben Miller, Jr., and W. L. Elkins.

In class A, motor cycles, the cup offered by Banker Brothers went to H. P. Mashey; time 1:33.

In class B, electrics under 1,500 pounds, the cup offered by James Francis Burke was awarded to J. H. Lindsay; time 2:01 2-5. The result in this event is especially gratifying as Mr. Lindsay's Centaur made the best time among all the electrics and its victory was very clear cut.

In class B, electrics over 1,500 pounds, the cup offered by President G. H. Flinn was awarded to W. N. Murray, who won with his Studebaker in 2:14.

The C. H. Dixon cup in class C, steam machines under 1,200 pounds, went to W. H. Artzberger, won in a machine of his own make; time 1:41 1-5.

In class D, steam cars over 1,200 pounds, the cup presented by Thomas R. Hartley was awarded to J. H. Lindsay, who won in a White touring car; time 1:40 3-5.

In class E, gasoline cars under 1,000 pounds, the cup offered by Dr. H. W. Arling, went to Dr. W. C. Cook, Duryea; time 2:21 3-5.

In class F, gasoline cars between 1,000 and 1,500 pounds, the cup presented by J. C. Grogan was awarded to T. H. Guffey, won with a Decauville; time 2:10 1-5.

Class G, gasoline cars between 1,500 and 2,000 pounds, cup offered by W. C. Temple, awarded to George H. Flinn, won by a Daimler; time 1:18.

Class H, gasoline cars over 2,000 pounds, cup offered by T. F. Lovejoy awarded to A. R. Neeb, won with a Peerless; time 1:37 3-5.

Class I, free-for-all cup offered by the committee awarded to A. L. Banker, won with a Peerless racer; time 1:15 4-5.

First Transcontinental Trip Ended.

The first successful automobile tour across the American continent was brought to a close on Sunday, July 26, when Dr. H. Nelson Jackson, of Burlington, Vt., accompanied by his mechanician, Sewall K. Crocker, and his bull dog "Bud," arrived in New York City after a most eventful trip, full of interesting experiences and not a few hardships, which began in San Francisco May 23. Dr. Jackson is justly proud of his achievement, especially as it was accomplished without serious accident, although the party was subjected to some vexatious delays on account of bad weather, tire troubles and repairs to the vehicle.

The machine which made this remarkable trip, a 1903 model Winton touring car, is being cared for in the 58th Street garage of the Winton Company, in New York, where it has been seen by many curious people during the week. It is thickly coated with mud, but otherwise appears to be in excellent condition for a car that has traveled across the continent over all sorts of roads that in some places were almost no roads.

Breakages were few, considering the hardships to which the machine was sub-

jected. They include broken connecting rod bolts, a fractured inlet tube, and some trouble with one of the front wheel bearings, which had to be replaced on two different occasions. Tire troubles were a source of annoyance and delay, seven new and one second-hand tires having to be fitted during the journey.

Dr. Jackson attributes no little part of his success to the skill and experience of Crocker, his chauffeur, an expert gas engine mechanic, who is an old cycle racer having driven a pacing machine for Frank Waller some years ago, and in that way first took up the study of gasoline motors.

Appropriated an Automobile.

Special Correspondence.

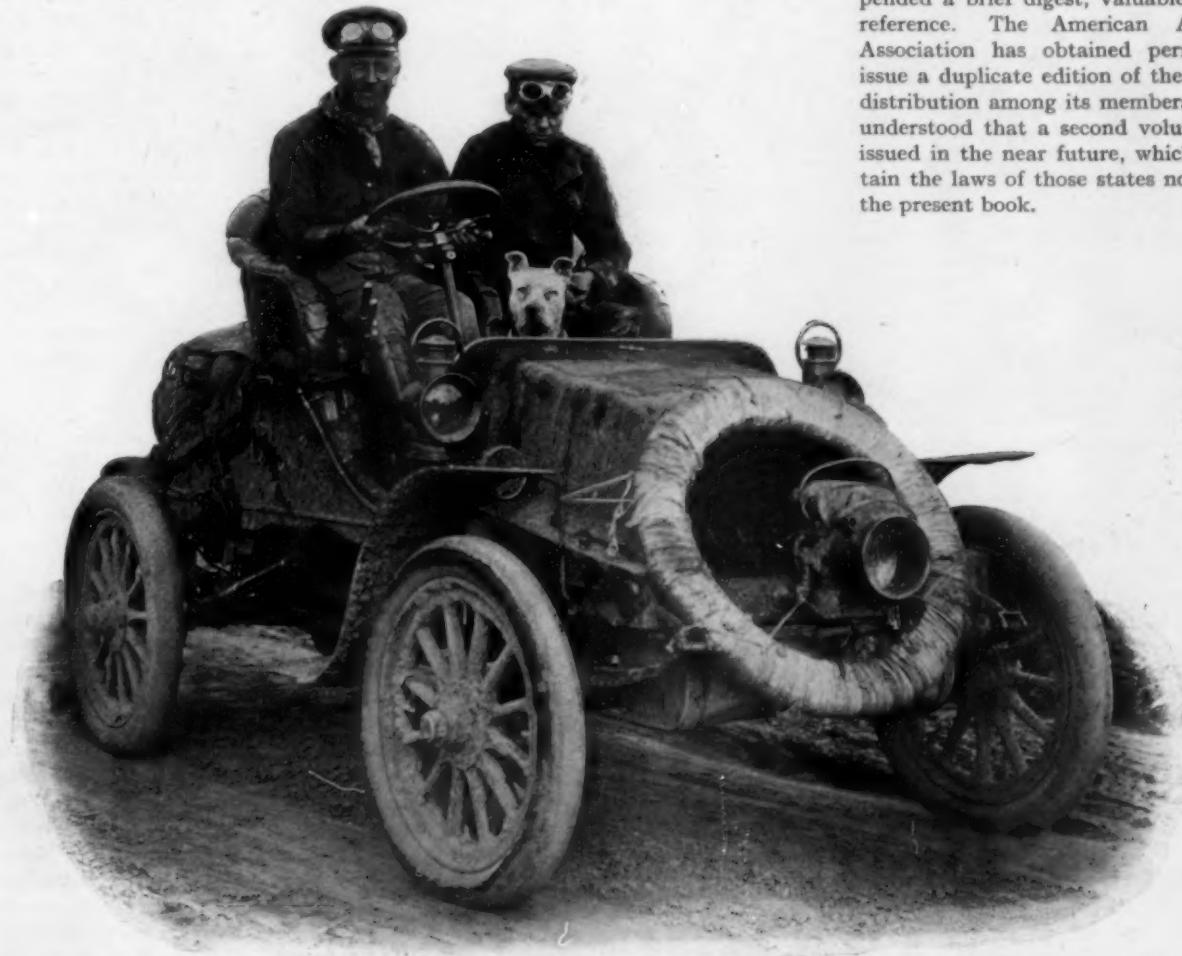
BUFFALO, July 27.—The first automobile stolen this season in Buffalo was taken from in front of the Cantor Vehicle Company's place on Franklin Street last Wednesday afternoon. The machine was valued at \$850. The firm notified the police immediately and the manager of the Cantor Vehicle Company told the police he suspected William G. Cross, a man who had worked for him as a repairman for a week.

A detective was detailed on the case and the manager took him about the city in a fast touring car. The detective and manager went through all the parks, city boulevards and principal streets. Coming from South Buffalo they rode up Michigan Street from Seneca and the manager of the company then saw an automobile he thought was the stolen machine standing in front of a saloon.

The detective went inside the saloon where he found Cross and a companion hiding in a side room. Cross' companion was Loren C. Walker, who had been a salesman for the Cantor company for a short time. The men were locked up on the charge of grand larceny in the first degree. They said they took the machine for a ride and intended to return it. They have been held for trial in police court.

Book of State Auto Laws.

The Automobile Club of America has just published, for the exclusive use of its members, a handy pocket volume containing a copy of the full text of the automobile law in each of the following states: New York, New Jersey, Pennsylvania, Connecticut, Massachusetts, Rhode Island, Vermont, Maine and Delaware. In addition to the full text of each law there is appended a brief digest, valuable for ready reference. The American Automobile Association has obtained permission to issue a duplicate edition of these laws for distribution among its members, and it is understood that a second volume will be issued in the near future, which will contain the laws of those states not found in the present book.



DR. H. NELSON JACKSON AND SEWALL CROCKER, WHO CROSSED THE CONTINENT IN SIXTY-FOUR DAYS, AND THEIR WINTON OUTFIT.

Correspondence

Prolonging the Life of Tires.

Editor THE AUTOMOBILE.

Sir—Is there any thoroughly good compound known for prolonging the life of a single-tube tire which has been frequently punctured and plugged, or which for any other reason has got into a condition of generally diffused leakiness? I have tried several of the compounds on the market and the best of them would sometimes work very well, but all of them seemed liable either to fail to heal the leaks or to gradually rot the rubber, causing the tire at some later time to burst. As many tires are leaky long before they are worn out, an effective device to prolong their life could add greatly to their value.

E. W. T.

A set of three very useful formulas was published in THE AUTOMOBILE of January, 1902, which may be applied by any automobile or bicycle user. The compound there described is due to Dr. Paul Norwood, and is a mixture, in proportions suited to the weather and the size of the tire, of ordinary molasses and glue. It is both stiff and elastic, and in the ordinary single tube tire used on steam carriages will heal not only leaks around plugs and valves but also small punctures, though of course not large punctures or cuts. It does not act chemically on the rubber, and, should vulcanizing ever be necessary, it can at any time be cleaned off with hot water. Plugging is accomplished by heating a stout bent wire and melting away the compound around the puncture, after which the plug is inserted, with liquid rubber, in the usual way, and a little more compound injected to cover it inside.

The three formulas are as follows:

No. 1.—Molasses, $2\frac{1}{2}$ pints; powdered glue, 1 troy pound (about $13\frac{1}{2}$ ozs. avoirdupois).

No. 2.—Molasses, $2\frac{1}{2}$ pints; powdered glue, $1\frac{1}{2}$ troy pounds.

No. 3.—Molasses, $2\frac{1}{2}$ pints; powdered glue, 2 troy pounds.

Mix and heat in a double cooker with boiling water around the vessels containing the compound. When fully liquefied inject from $\frac{1}{2}$ to 2 pints (according to size of tire) into the tire with a strong foot or lever pump from which the valve has been removed. The valve should first be removed from the tire. If the weather is cold the pump and hose may be warmed with hot water. When the mixture is injected, spread it by rolling the tire on the ground while collapsed. Inflate at once.

The first formula is used for ordinary leaks and even, in cold weather, for small punctures. The second formula is used where the first fails; and the third is proposed by Dr. Norwood for filling the tires of heavy vehicles up solid. To do this,

of course, destroys the pneumatic quality of the tire, and probably most users will prefer to retain that quality as nearly unimpaired as possible by using the lightest mixture that will do the work, and as little of it as will serve.—ED.

Sizes of Feed Pipes.

Editor THE AUTOMOBILE:

Sir—Will you kindly tell me what the usual inside measurements are of the pipes leading from the carbureter to inlet valves on French cars of multiple cylinder type? I desire this information in regard to motors from 10 to 20-horsepower.

E. L. T.

Buffalo, N. Y.

The inside measurements of pipes leading from the carbureter to the inlet valves on French machines of multiple cylinder type are as follows:

Inches.
Old 24 H. P. Panhard Touring Car, 1 5-16
Old 12 H. P. Panhard Touring Car, 31-32
Old 8 H. P. Panhard Touring Car, 3-4
Old 16 H. P. Panhard Racing Car, 1 1-8
New 16 H. P. Panhard Centaur Type 1
New 18 H. P. Panhard Centaur Type 1 5-16

All of the foregoing have four cylinders. Decauville 10 H. P. two cylinder car, 1 1-8 Decauville 16 H. P. four cylinder car, 1 1-8

The foregoing may be taken as fair samples of good French practice.—ED.

On Change Speed Gears.

Editor THE AUTOMOBILE:

Sir—I was very much interested in the article on managing the sliding gear train in your issue of July 4. I notice, however, that there is one point which may interest a good many operators that is not touched on, and that is the fact that it is easier to change gears on a machine that has a chain drive than it is on a machine with a bevel gear drive. The reason for this is quite simple. At the moment of changing, if the teeth of the gear that slides come in contact with the ends of the teeth on the second motion shaft instead of striking between them the friction caused by the contact will almost instantaneously slow up the second motion gear sufficiently to let the teeth mesh. That is, there is as much play in a chain as amounts to the space between the two adjacent teeth. With a bevel gear drive where there is no back lash in the bevel gear, it is impossible to change speed unless the gear strikes fairly in mesh. In practice this is not a serious disadvantage, but changing gear with a bevel gear drive is frequently not accomplished without a good deal of grinding between the gears before they mesh and it is invariably more noisy than the same operation with the chain drive. Another point that is usually overlooked by designers is that it is very much easier to change gears where the change speed lever has a considerable amount of travel than where its movement is very limited. In the former you get the advantage of

the momentum of the lever and the sliding gear in the distance that they travel before engaging, whereas in the latter the change is made so abruptly that the gears do not mesh sweetly at all, and in some machines it is largely a case of main strength.

There are perhaps little points, but they are good ones for the driver to bear in mind, and go a good way to explain certain differences in operation that are often the subject of discussion. Sometimes, indeed, the skill of the operator is called in question when really the fault lies with the method of construction.

J. T.

New York.

Electric Wagon Economy.

The Willard Storage Battery Company is pointing with justifiable pride to a remarkable record for durability established by one of its batteries which has been in use on an electric patrol wagon owned by the neighboring city of Akron. This wagon was described and illustrated in this paper some time ago. In July, 1899, the vehicle was completed after designs by F. F. Loomis, mechanical engineer for the city of Akron. The vehicle was equipped with a Willard battery which has never been renewed. It is still in first-class shape, performing its work every day. When the vehicle was placed in operation the city authorities instructed those in charge to keep a careful record of its performances in order that the efficiency of the motor vehicle might be thoroughly tested. The results are most pleasing. Up to April 19, 1903, the total number of miles traveled was 6,706; total number of passengers carried, 12,085; average number of runs per day 3 3-4; maximum number of runs per day, 15. During one year the saving over the cost of a horse-drawn wagon was 63 per cent., figured on a basis of the same amount of work for each. This takes into consideration every item, no matter how small, including interest on investment in real estate, etc. Remarkable as is this record, it can hardly be considered a fair test of the efficiency of a wagon of this type on account of the unusual grades encountered in Akron. There is hardly a level street in the town and there are about twenty heavy grades, some of which have to be climbed every time the wagon goes out. These grades run from 6 to 14 per cent. and will average from 10 to 12,000 feet in length. The figures presented are claimed to be thoroughly reliable and they should be of great interest to those who are contemplating the use of electric delivery wagons, since they certainly refute the generally accepted idea that no battery will last more than a year or two in regular work.

The fiftieth permit to operate a motor car in Akron, O., was issued at the mayor's office on July 7.

First Buffalo Automobile Club Run.

Special Correspondence.

BUFFALO, July 27.—Stirring breezes, a warm sun and a cloudless day, made the first run of the Automobile Club of Buffalo to Hamburg last Saturday afternoon a success in every way. The members turned out in force, and many motorists joined the procession as it wended its way through the principal streets before taking to the country roads for the fast spin. It was thoroughly enjoyed by those who participated in it. Several club members who live in Tonawanda and Niagara Falls came up to Buffalo to join the run.

Forty-eight cars departed from the starting point at the City and County Hall building, led by President William H. Hotchkiss, who had been first to arrive at the rendezvous. The long line of

and others have taken up with the authorities the matter of permitting a numbered Canada license tag to be displayed on the rear of an American car, when the new Canada law goes into effect September 1. A tag will be far preferable to the proposed big license certificate.

The homeward run began at 8 o'clock in the evening. At 9 o'clock the procession dispersed at the City Hall in Buffalo.

Among those to make the run, accompanied by their wives and friends, were: W. H. Hotchkiss, president; F. J. Wagner, secretary; A. H. Knoll, vice-president; H. C. Wilcox, Herman Bernhardt, H. J. Jacobs, Dr. B. H. Grove, N. P. Baker, Fred C. Carter, Judd Vashion, Charles O. Almendinger, J. H. Betts, D. H. Lewis,

much greater fuel and water capacity. Many other improvements are to be made, much experience having been gained from the use of the present racing cars.

Oldfield is anxious to enter some of the great long distance road races on the other side of the Atlantic, particularly in France or Germany, and he intends going over next season with the new Ford machine. He seems especially interested in the Gordon Bennett cup races.

Luck in Numbers.

James G. Mulholland, automobile license clerk in the office of the city clerk in Cleveland is in a quandary. Within the past few weeks he has had no less than twenty applications from persons who desire to secure No. 999. It appears that Clevelanders seem to have a fascination for combinations of the same number. No. 666 was in great demand and the call for 777 was greater. A lady who had been



MEMBERS OF AUTOMOBILE CLUB OF BUFFALO ASSEMBLED FOR CLUB RUN TO HAMBURG, N. Y.

brilliant automobiles filed through Delaware Avenue, through the parkways, made a short circuit of the northern part of the city to Hamburg Street, then turned into the Hamburg Turnpike, where the exhilarating ride over country roads began.

The run of twenty-seven miles to Kopp's Hotel was made in 2 hours 2 minutes, including the time consumed in parading through the streets of Buffalo and the slow pace through Hamburg. Of the forty-eight machines that started, thirty-one got through with no trouble. Over a bountiful repast in the main hall of Kopp's Opera House the automobilists recounted incidents of the run. President Hotchkiss was called upon to make a speech, and told of the efforts that had been made to secure modifications of the Canadian tariff law relative to automobiles. He

W. B. Grandison, F. A. Babcock, Harry Thorp Vars, J. H. Islam, Paul Krier, J. B. Eccleston, John W. Frey, W. P. Goodspeed, L. H. Baker, W. C. Jaynes, Cal Paxton, E. R. Thomas, F. W. Butts, W. U. Watson, E. Burkhardt, W. O. Rutherford, A. H. Sowers, J. A. Cramer, G. E. Kibler, Val P. Young, J. Fred Morlock, H. J. Wagner, A. J. Wells, F. P. Wells, Henry Ford, George B. Rose, P. K. Harlow, George W. Farnham, B. R. Julier and S. G. Hurst.

Better Machine for Oldfield.

Barney Oldfield is to go in for road contests next season, it is reported, and Henry Ford, designer of the famous "999," as well as of Tom Cooper's machine, is to build him a high-powered car for this work. The machine is to be lighter in weight than the other fast Ford racers, and is to have

on a still hunt after the other numbers mentioned, landed No. 888, although a number of other people were after it. There seems to be something particularly suggestive about No. 999. It was the number of a locomotive which enjoyed an international reputation, and the world's track records are held by Oldfield's car known as 999. The number in question will soon be handed out, and it is claimed that Cleveland now has more automobiles than any other city in the country. Cleveland's automobile ordinance is considered a model one and scarcely a day passes but there are communications from officials in other cities asking for copies of the ordinance. If it could be universally adopted there would be less complaint of speed restrictions, since the speed limit is 15 miles an hour, which is considered quite liberal.

The Motor Boat "Rampant."

The design of the gasoline cruising yacht *Rampant*, built for J. A. Serrell, of Bayonne, N. J., and launched recently from Green Bros.' shipyard, in Bridgeport, Conn., involves some novel features and is the joint work of the owner, who planned the general arrangement, and of W. P. Stephens, who designed the hull. The dimensions are: Length over all, 65 feet; load water line, 56 feet; breadth, extreme, 13 feet 6 inches; breadth at water line, 12 feet; fore overhang, 3 feet; after overhang, 7 feet; freeboard at bow, 5 feet; least, 3 feet 6 inches; at counter, 4 feet 3 inches; draft, extreme, 3 feet 9 inches.

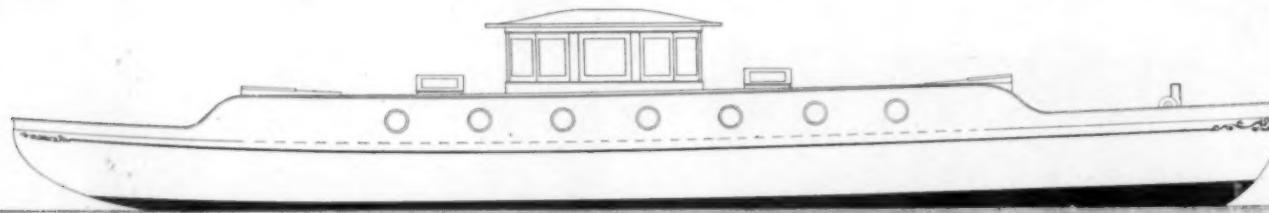
A liberal amount of displacement has been taken in order to give ample accommodation, but the design shows a very fair and easy form, with a long clean bow,

the port side giving a galley and toilet room, while on the starboard side there is a passage fore and aft, and a wide, deep locker, making a comfortable berth by night. The forward cabin is 16 feet long, fitted with four permanent berths. The after cabin is 14 feet long, with wide transoms sleeping four very comfortably. The joiner work about the motor is very ingeniously fitted so that everything may be quickly removed to give access to the machinery. A writing desk and bookcase in the forward cabin and a folding table and linen locker in the after cabin form the end casing. There is a movable bulkhead on the port side, and the pilot house floor may be lifted out. Large closets and lockers are provided in various places and the spaces under the berths are fitted with large drawers. The forecastle gives good room for one hand, the owner being both

from posts or other obstructions. A large, well-lighted office, the headquarters of the company, is at the left on entering the building; a nicely furnished reception room for women is also provided, as well as a number of large individual lockers for the use of patrons. As will be seen from the accompanying illustration, this garage is well lighted, offering unusual opportunities for displaying automobiles to good advantage, the entire front being of plate glass.

The repair department, in the basement, reached by a 4,000 pound hydraulic elevator, is equipped with modern machinery for repairing steam, gasoline and electric vehicles, each department being in charge of an expert mechanic trained to his special work.

Especial efforts have been made to provide complete facilities to properly maintain electric vehicles, which are very



OUTBOARD PROFILE OF 25-HORSEPOWER GASOLINE LAUNCH "RAMPANT," DESIGNED BY W. P. STEPHENS.

free from any hollow, and also a long run with flat buttock lines. The hull is of the whaleboat type, sharp on deck aft, and the sides are carried up from the sheerstrake to form the sides of the cabin trunk, thus giving a deck 40 feet long and of an average width of over 12 feet, the height being but 6 feet above the water. This deck, which is reached by a single step from the main deck at bow and stern, gives a convenient passageway fore and aft, and when covered with an awning will make a most comfortable lounging place, whether at anchor or under way.

The most striking feature of the yacht is the pilot house, which is of oval form and placed directly in the center of the deck, its floor being a platform 9 feet long and 3 feet wide immediately over the motor, thus being about 2 feet 8 inches below the upper deck. Though intended only for the helmsman, this room, which is 10 feet long and 6 feet wide, with windows on all sides, will make a very pleasant place in bad weather. It is reached by a short ladder from the engine room, and all levers for the control of the motor are carried up by short and direct connections through the floor. The helmsman not only has a clear view of the entire horizon, but he can easily step below to care for the motor or out on deck if needed there. He is never in the way in the saloon and on the other hand is free from the disturbance of conversation.

The motor, a 25-horsepower, two-cylinder Globe, occupies a length of 9 feet near the center of the boat, the space on

engineer and pilot. The gasoline tanks are located aft and an ample supply of water for long cruises is carried under the cabin floors. The yacht is fitted with two long masts carrying leg-o'-mutton sails, with one jib. She will carry three boats at the davits.

New Garage in Denver.

A complete and well equipped garage has recently been erected at 1432-38 Court Place by the Colorado Motor Carriage Co., of which Charles Bilz is manager.

The building, which was designed especially with the object of supplying as complete auto storage and repair facilities as possible, covers a ground area of 2,500 square feet, the entire floor space being free

popular in Denver, and a large switchboard is one of the features of the installation. Six electric carriages can be charged at one time.

The Colorado Motor Carriage Co. is state agent for White steam vehicles, and handles also Columbia electric carriages and Orient gasoline machines and carries in stock a full line of automobile accessories and supplies.

Chicago will celebrate its centennial and the one hundredth anniversary of the establishment of Fort Dearborn during the week of September 26 to October 1, and the automobile will take a prominent part in the festivities. A committee of members of the Chicago Automobile Club, with A. C. Bunker as chairman, is arranging for road and track races for the week.



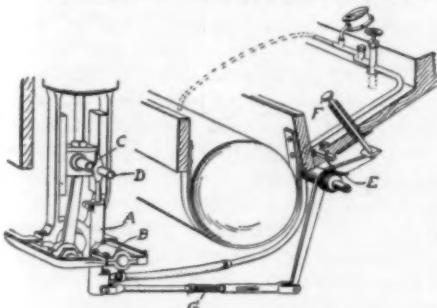
NEW DENVER GARAGE OF COLORADO MOTOR CARRIAGE CO.

Patents

Air Pump Mechanism.

No. 734,028.—R. H. White, of Cleveland, O.

The pump barrel *A* is arranged to rock on a trunnion in bearing *B*, and the upper



WHITE AIR-PUMP MECHANISM.

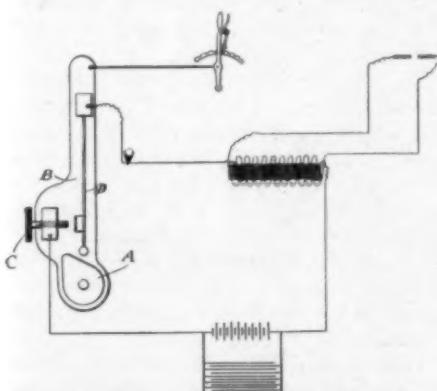
end of the plunger rod carries a hook *C*, which in the operative position engages the pin *D* projecting from the engine crosshead. The pump is normally tilted back till *D* does not engage *C*, by the agency of spring *E*; and it is brought into the position shown by pressing on the foot-button *F*. Spring *G* allows the pump to suit itself to the motion of the crosshead when in operation.

Carbureter.

No. 734,421.—A. Krebs, of Paris, France. The Krebs carbureter described in THE AUTOMOBILE of Dec. 27, 1902.

Ignition Trembler.

No. 734,138.—A. L. Riker, of New York. A mechanical trembler differing from



RIKER "TOE" IGNITION TREMBLER.

the De Dion mainly in that the cam *A* operating it has a "toe" instead of a notch. *B* is the insulating mounting which may be rocked to vary the time of ignition, *C* is the contact screw, and *D* the spring.

Reversible Galvanic Battery.

No. 727,117.—T. A. Edison, of Llewellyn Park, N. J.

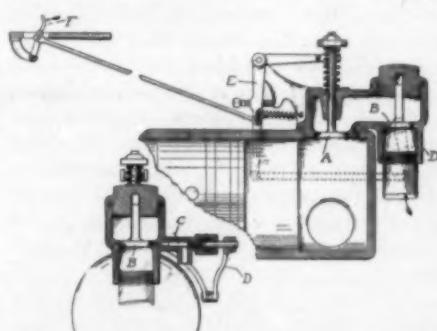
An improvement on the Edison nickel-iron storage battery, by which the efficiency of the iron element is increased

and the cell enabled to sustain its voltage better during discharge. The improvement consists in coating each of the minute particles of iron with a porous envelope of copper, mixed with iron oxide. This coating improves the electrical conductivity from particle to particle, and results in a saving of iron that more than offsets the added weight of copper. At the same time the copper does not share in the oxidation of the iron which goes on during discharge, provided only that there is a slight excess of unoxidized iron left on complete discharge—i.e., when the nickel element (nickel hydroxide) is completely reduced or deoxidized. Several processes of depositing the copper on the iron are described in the patent.

Mixing and Regulating Device.

No. 734,415.—P. Gaeth and A. Griebel, of Cleveland, O.

A is the inlet valve, and *B* a mixing valve, to which gasoline is supplied by the needle valve *C* in the lower

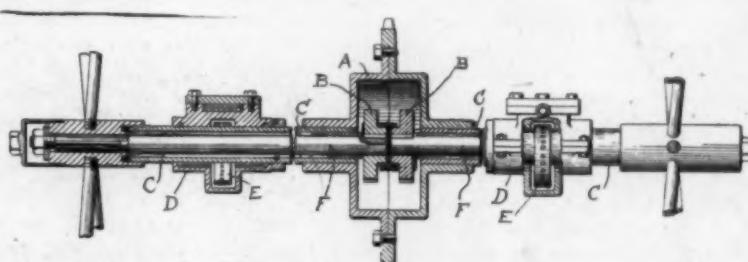


GAETH & GRIEBEL REGULATING DEVICE.

view. This valve *C* is regulated by screwing, and is connected by arm *D* (dotted in the upper view) to the bell crank *E* by which the amount of opening of *A* is limited. Thus a simultaneous movement reduces the lift of *A* and the needle valve opening, and vice versa. A pedal *F* may be arranged to operate the system.

Rear Axle Construction.

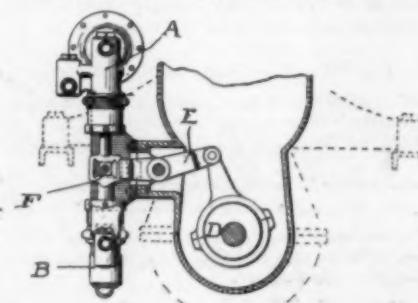
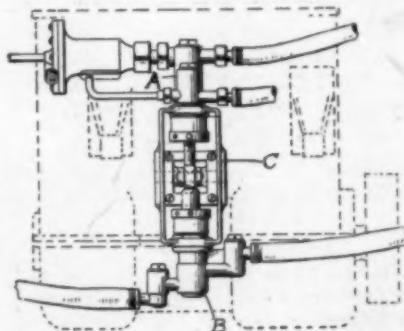
No. 734,080.—W. Morrison, of Chicago. *A* is the casing of a spur gear differential, of which *B* *B* are the principal gears. *A* is



MORRISON REAR AXLE MECHANISM, WITH LUBRICATING RINGS.

brazed to tubes *C* *C*, which turn in bearings *D* *D* and are lubricated by oil rings *E* *E*. *B* *B* are keyed each to a shaft *F* *F*, turning in bushings in *C* *C* and keyed in the wheel hubs. The driving force is transmitted

from *A* to *B* *B* by the spur pinions usual in differential gears, and on a straight course *C* *C* and *F* *F* turn together without



WHITE FUEL AND RETURN WATER PUMP.

relative motion, *C* *C* supplying the rigidity and bearing surfaces and *F* *F* driving the wheels.

Pump Mechanism.

No. 734,029.—R. H. White, of Cleveland, Ohio.

This mechanism (designed for the White steam carriage) comprises two pumps, one *A* for feeding the "generator" and one *B* for returning the water from the condenser to the tank. The pumps are single acting as usual, and are mounted on an open frame *C* bolted to the side of the engine. The plungers are worked by eccentric *D* and rocking lever *E*, the forked end of which carries the sliding block *F*.

A Jersey City, N. J., jury has awarded Herbert E. Smith, of that city, \$500 damages for injuries to himself and his automobile sustained in a collision with a

trolley car. Mr. Smith sued the Jersey City, Hoboken and Paterson Railroad Co. for \$5,000 damages, and the jury allowed him \$300 for his personal injuries and \$200 for the damage done to the automobile.

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SATURDAY, AUGUST 1, 1903.

INTEREST IN RACING.

Widespread public interest in the automobile in the metropolitan district was displayed by the great outpouring of spectators at the races in Yonkers last Saturday. Though held in the height of the vacation season, when thousands of business men are away from New York and other thousands make week-end trips to nearby resorts, the meeting drew an immense crowd of enthusiasts. Motorists were well represented in the grand display of machines on the grounds, in itself an automobile exhibition that was worth a visit to the track, aside from the program of sport.

There was only one disappointing feature about the meeting, and that was the scarcity of cars of American build in the several events. To be sure the most spectacular feature of the program was the record-smashing by Barney Oldfield. The machine he drove, however, is not an accepted type and though it represents a good deal of originality in design and skill in construction, that makes the smashing of world's records by Oldfield an every-day possibility, yet it does not represent the out put of any large American shop, or blaze the way for any modifications of conventional designs. These conditions at the track were of advantage, however, to

one distinctive type of American car. The remarkable performances of the air-cooled Franklin machine stood out the more noticeably as the only regular stock type of American car entered that achieved distinction.

It is to be hoped that other makers will take heart from such an example and will not fail to be adequately represented at the next great metropolitan meeting. Without doubt the management would be more than willing to add to the program special races for American stock cars of the usual sizes and types. Builders and dealers are usually glad to show the speed and other qualities of a car to an individual prospective purchaser and here is an opportunity to publicly show these qualities to hundreds or perhaps thousands of possible purchasers.

MR. MOOERS' EXPLANATION.

"We were outclassed." This is the simple, manly, explanation of defeat that L. P. Mooers made upon his return, last week, from Europe. As the designer and driver of the Peerless car in the Gordon Bennett race, Mr. Mooers divided the responsibility of upholding the art of automobile construction in the United States and the grand traditions of American sportsmanship in widely diversified fields of human effort. To the magnificent skill of the drivers of Continental Europe Mr. Mooers pays a graceful tribute, in the interview published elsewhere in this issue.

Mr. Mooers struck the keynote of the whole situation when he remarked that the only way to develop the automobile along the lines of European progress was to gain experience in the actual sport of road racing. As we have previously had occasion to say, it is very doubtful if American builders are warranted in competing in such events as the Gordon Bennett race. Under existing conditions it is practically impossible for any of our builders to get experience in the behavior of cars at the highest speeds on the public highway. Legal regulations either local or State impose such restrictions that road racing is practically impossible. In New York State the law permits the sanction of road races by the local authorities. Such consent even if given would not place automobile builders or organizations on the same footing with those abroad. Sanction doubtless does not relieve the automobilists from their common-law responsibilities and the question of guarding the roads is reached at once. In continental Europe where conscription removes tens of thousands of able-bodied men from useful employment, the war authorities are probably glad to permit troops to guard the roads as an inexpensive diversion for the military unemployed.

In Ireland where the supremacy of the English Crown is safeguarded by a large and splendidly drilled semi-military body

of constabulary, the policing of the course was an easy matter—a concession to Irish sentiment not without political value. In the United States no such conditions prevail. Federal or State troops are not available and the cost of adequately policing a long road course would be prohibitive.

It is difficult to see what arguments can be advanced in favor of our participation in foreign road races under existing conditions. Take a parallel case in rifle matches. Sportsmen would not dream of sending an American team that had practiced shooting at indoor ranges only to compete abroad in the open at 1,000 yards range. Or again in the case of the America's cup yacht races. Public opinion would not support challenger or challenged if they had no means of trying out their respective boats except under water conditions similar to our auto track tests or farcical eliminating trials on land.

It is pleasant to be able to record Mr. Mooers' appreciation of the efforts of Clarence Gray Dinsmore, the American representative of the International Commission in behalf of the American team. His sportsmanlike action in lending his Mercedes car to Jenatzy so that the real international character of the race would be sustained, showed the true liberal American spirit.

SPREAD OF AUTOMOBILISM.

Any observer who is in touch with automobile doings throughout the country must be impressed with the wonderful spread of motorism during the past season. Never before has the automobile been held in anything like the public estimation it is to-day. This is due to a great variety of causes, among them the superior quality and reliability of a majority of machines now on the market, but chiefly to the intrinsic merit of the sport.

He is a poor citizen who is not possessed of some degree of local and State pride and who has not always had a longing to know more of his own section than can be learned from the windows of a fast-moving railroad car. Now he discovers at hand a means of getting about in comfort, entirely independent of time-tables and schedules, and he is showing his appreciation in the immense volume of business transacted by leading builders.

From various sources information comes of trips and tours, ranging from transcontinental automobile exploration to week-end journeys to nearby summer resorts for health and pleasure. Inquiries for routes grow apace, in fact in far greater degree than the supply is met. The network of agencies continues to spread out, even covering remote parts, and almost every mail brings news of club activities and organization.

And yet this is only a foretaste of what the conditions will be when the modern means of locomotion has become a habit

and not an acquired taste. An immediate result of this public interest and appreciation is the gradual development of the trade into all the year-around business. The wise manufacturer sees this and quietly incorporates in his vehicle improvements as they are developed by experience and does not wait for a new-model period of activity at one end of the year and masterly inactivity during the remainder.

STANDARD GAUGE.

It is very generally known that the standard American railway gauge is 56½ inches; and most people know that the standard wagon gauge or "track" is 56 inches. These facts seem at first glance so simple that one could not get them wrong if he tried; but that there is more in the matter than the first glance reveals is shown by the fact that, in the automobile industry, "standard" tread means 54 inches about as often as it does 56. In fact, a search through the catalogues nearest to hand discloses a division exactly even, seven being on one side and seven on the other. This excludes the narrow gauge and scattering returns, from 48 inches to 52½, amounting to six or eight in all.

The explanation of this singular confusion is found in the fact that gauges nominally the same may or may not be measured to the centre of the tires. Thus, the gauge of the steam or electric railway is measured, not from centre to centre of the rails, but from inside to inside of the thickest part of the rail head. Wagons for city use have a gauge one-half inch narrower than this, measured from outside to outside of the tires, where they touch the ground, so that the tires will run inside the trolley car tracks. On dirt roads, on the contrary, such a system of measuring the gauge would be impracticable, since the outside of every wheel would be rubbing against the ruts. Consequently, in the country the gauge is measured from centre to centre of the tires, and the narrow tires run freely in the tracks of the wide ones. This country gauge is 56 inches in most sections, but not in all. New Jersey boasts a gauge which, like the Jersey mosquito, is of superior dimensions, being 60 inches from centre to centre; while Rhode Island, the smallest state, is appropriately represented by the widest gauge of all—62 inches.

As the tread of an automobile is necessarily measured from centre to centre, the 54 inch gauge is in reality due to an endeavor to match the "out to out" measurement of the city wagons, and produce vehicles which will follow car tracks without cutting the tires when the rails are worn. Accordingly we find the latter gauge slightly more popular in the East, and the 56 inch gauge in the West.

From the constructor's point of view, either of the "standard" gauges is about six inches too wide for the most effective use of material; and as good roads become the rule we may look for the progressive adoption of a narrow gauge.

L. P. Mooers Back from Ireland Talks About Gordon Bennett Race.

Of the four Americans who competed in the Gordon Bennett cup race, the first to return to this country is L. P. Mooers, of Cleveland, who arrived in New York by a Cunard liner last Sunday.

Fresh from a hurried trip around the automobile world of London and Paris, and wearing his customary smile and a Parisian straw hat, Mooers expressed himself as glad to be back home again, but sorry that the American team made such a poor showing in the great race over the Irish course. "We were outclassed, and that's all there is to it," he remarked. "There is no use in trying to offer explanations; we could see that we were not in it just as soon as the German and French teams arrived. Those chaps are born racers, everyone of them has been up against road racing before, and they were all driving machines which had been perfected as the result of previous contests of this kind, and I'll tell you that is the only way to develop an automobile. Track racing is all right, but it hasn't any practical value at all compared with an event like the Irish affair."

When asked what particular feature of the foreign cars seemed to him the most striking and effective, Mooers replied: "Why, they had a tremendous advantage because they could start practically at full speed; it was marvelous, the way the cars jumped forward when the clutches were shot home."

Mooers recounted briefly the troubles that put him out of the race, the first of which was due to a tire pulling off about forty miles from the starting line, while a similar accident near the end of the first circuit led him to withdraw. He said: "The second accident happened as I was taking a sharp turn to the left, the outside front tire leaving the rim and throwing my machine into a sort of ditch at the roadside. I could see that I had no chance anyway, so we replaced the tire and drove to a point near the Athy control, one of the best places on the course to see the race, and stayed there until it was over."

Mooers is of the opinion that American made tires are not suitable for road racing, stating that the thin edge of the outer cover, or that part of the cover which is clamped by the tire lug, should be made of fabric, as it is in French tires, instead of rubber. The rubber, being flexible, pulls out from under the lug, due to the side strain when taking a sharp corner at speed. The tires on the Peerless machine were not punctured, neither were they injured in the race, they merely pulled off bodily, each time on a sharp turn.

Regarding the reports of inferior quality gasoline, which have been discussed,

Mooers said: "Now all this talk about poor gasoline is worse than nonsense; it not only reflects on the common sense of our boys, but it holds the American team up to the ridicule of everybody knowing the facts of the case. We had the fairest kind of play from every one, even the other contestants couldn't do enough for us, or for each other, and I have never seen an event where everything went off so smoothly. All the racers used Pratt's Motor Spirit, which is an American gasoline put up in sealed cans and sold by two of the largest stations or garages in Dublin. Not only did the American team use Pratt's spirit, but the English team as well; the foreigners brought their fuel with them but it was virtually the same thing. If any competitor used poor gasoline it was his own fault because good fuel was right there and could be purchased in almost any quantity."

Asked about the treatment accorded the Americans, Mooers replied, "Our boys were treated like princes, everything, even the smallest want, was promptly attended to. Clarence Gray Dinsmore, the American representative on the International Commission, which had charge of the race, was especially attentive to us. You will remember that Mr. Dinsmore owns the Mercedes car which Jenatzy drove to victory; just before I was given the word to start, Mr. Dinsmore came up and shaking hands, said, 'Well, I hope one of our boys will win that cup, but if Uncle Sam can't have it, why I hope Jenatzy will win, because he is driving my machine, you know. I only hope he won't get too reckless, that's his worst fault. The American team," continued Mooers, "should be everlastingly grateful to Mr. Dinsmore for his efforts in our behalf."

Just before bidding Mooers good-bye he was asked about the proposed race between his machine, the big 80-horsepower Peerless, and Percy Owen's Winton cup racer, possibly including Winton's own car. Having just arrived, Mooers had heard nothing about such a match, but was eager to learn particulars, and expressed himself as ready to enter such a race almost at any time. It would, of course, be a difficult matter to find a suitable location for a road race, so the contest would probably take place on a track. Mooers said he would probably see the other proposed contestants in a few days, and perhaps a match could be arranged.

The latest advices from London bring the news that, as a result of the automobile craze, which has taken a strong hold on English society, there has been a marked slump in the yacht market, both purchase and hire.

FETCH AND KRARUP REACH DENVER FROM SAN FRANCISCO.

Special Correspondence.

DENVER, Col., July 21.—The arrival of the Packard transcontinental car from Colorado Springs yesterday afternoon stirred this city to a more than usual interest in automobile affairs. The car, driven by E. T. Fetch, of Warren, O., and with M. C. Krarup occupying the other seat, had started from the Springs at 10 o'clock in the morning and would have arrived here at 3 o'clock or earlier but for the reception accorded the travelers *en route*. When eighteen miles from the city they were met by the four gentlemen representing the Packard Motor Car Co.'s interests in Denver, namely, George Gorton, of Warren, O., who is temporarily here as demonstrator; J. H. Nichols, Jr., O. T. Higgins and George Hering, the local agents, and a representation of the *Denver News*. "Old Pacific," and Messrs. Fetch and Krarup were cheered to the echo. The car was looked over and its good condition caused remarks of admiration for the skill with which it must have been conducted through the rough sections of Nevada, Utah and Colorado. Then the course was continued to Littleton, eight miles further, where the Denver Automobile Club had assembled to do honor to the travelers. Cheering was renewed and all business jealousy between various manufacturers of automobiles seemed to have been set aside for this occasion. The White steam tonneau, four Rambler cars, two Locomobiles, and one St. Louis car were represented, the occupants being the best known automobilists of this city, including the secretary of the Automobile Club, Dr. W. H. Bergtold. Others were E. R. Cumbe, C. V. Dasey, E. W. Swansborough, George E. Hannan, Ben Campbell, Charles Bilz, George E. Fell, W. T. Frazier, Joseph Mino, Mr. Joslyn and several ladies.

On the way from Littleton to the city the pace was faster than any indulged in by the overland travelers on previous occasions, Denver motorists being still partial to high speed, but the mud-stained vehicle held its place without difficulty despite its low gear. A bouquet was thrown to Mr. Fetch *en route* by an enthusiastic woman, but it fell by the roadside and only the shouts of the cavalcade rewarded the pretty donor.

Arrived in Denver, a circuitous route was followed to the Packard agency, giving all of Denver an opportunity to realize that "Old Pacific" had finished the most difficult and, in places, perilous portion of its itinerary.

New York Motorist Sued for \$10,000.

W. J. Manger, of New York City, who had been touring with a party of friends in a large touring car, met with an accident in Wilkesbarre, Pa., on July 23, his car striking a buggy in which a thirteen-year-old boy, C. W. Cease, and his mother were

driving. Although the boy was rendered unconscious, he was not apparently seriously injured. Mr. Manger gave the mother \$5 and rode away. Later the mother brought suit against the automobilist, asking \$10,000 and claiming that her son was seriously injured.

AUTOMOBILE TOURNAMENT IN MONTEREY, CAL., AUGUST 8 to 11.

Special Correspondence.

SAN FRANCISCO, July 24.—The first automobile tournament under the management of the Automobile Club of California will be held at Del Monte, Monterey, August 8, 9, 10 and 11. Motor cars from San Francisco, Oakland, Berkely, Alameda, Mountain View, Watsonville, San Jose, Menlo Park, San Mateo, and possibly also from Fresno, Los Angeles, Pasadena, Santa Barbara and other places, will take part. Though most of the automobiles entered in the tournament belong to members of the Automobile Club of California, all owners of automobiles are welcome.

The San Francisco contingent will leave on the 3 P. M. Oakland Creek ferry boat, and will proceed as they please to San Jose. Owners, if they prefer, may go to San Jose without crossing the Bay via San Mateo and Menlo Park. The night of the 6th will be spent at the Hotel Vendome, San Jose. In good time on the morning of the 7th, the automobiles will start and will rendezvous at San Juan, where luncheon will be served and it will be decided what route to follow to Del Monte—whether over the San Juan grade or around it by way of Watsonville. If it is decided to go over the hill, an automobile will be sent ahead to warn approaching drivers of horses. The way through Watsonville is eighteen miles longer, but in any case Del Monte will be reached in ample time for dinner. On Saturday, August 8, automobilists will have an opportunity of seeing the last day of the polo tournament and pony races conducted under the management of the Pacific Coast Polo and Pony-Racing Association.

On Sunday, August 9, in the afternoon, the automobiles will make a tour of the famous Seventeen Mile Drive, which is one of the finest marine drives in the United States. On Monday, August 10, beginning at 10 A. M., there will be hill-climbing contests at Carmel Hill, open to all machines, the prize being a silver trophy given by E. Courtney Ford, vice-president of the Automobile Club of California. In the afternoon, on the Del Monte race track, there will be eight races, as follows. Two-miles, for gasoline machines only, 1,200 pounds and under, for a silver trophy given by the Pioneer Automobile Company; three-miles, open to machines of 1,200 pounds and under, for a silver trophy given by C. S. Middleton; five-miles, open to machines 1,500 pounds and less, for a silver trophy given by the White Sewing Machine Company; one-mile obstacle race for a silver trophy; five-miles,

open to machines of 20-horsepower and less, for a trophy given by the National Automobile Company; ten-miles, open to machines of all powers and weights for a prize offered by F. A. Hyde, president of the Automobile Club of California; five-mile exhibition against time; five-mile handicap, open to all machines that have taken part in any of the preceding events, for the Del Monte trophy. This trophy must be won twice on the Del Monte track by the same person before becoming his property.

On Tuesday, August 11, the automobiles will leave the Hotel Del Monte at 9:30 A. M. for Point Lobor, a most picturesque headland jutting out into the Pacific Ocean. There luncheon will be served and the automobilists will return at their leisure. On Wednesday, August 12, the automobilists will start for the drive home.

'Frisco Motorists Making Test Case.

Special Correspondence.

SAN FRANCISCO July 24.—The war which the automobilists are waging against the ordinance recently introduced by the supervisors of Marin County was renewed on July 22. P. F. Rockett, who was arrested on June 30 for violating the clause which prohibits the running of an automobile on any road in the county between sunset and sunrise, surrendered himself by withdrawing his bond, and sued out a writ of habeas corpus, returnable July 27.

The Automobile Club of California has made no attempt to conceal its intention to test the legality of the ordinance by violating one of its sections. In the ordinance as at first drawn up the phrase used was "between the hours of sunset or sunrise." This defect was remedied at a special meeting held by the Board of Supervisors on July 13, when the word "and" was substituted for the word "or." Joseph R. Hawkins, attorney for P. F. Rockett and the Automobile Club, has entered into an agreement with the District Attorney of Marin County whereby no stress will be laid on the miswording of the ordinance.

It is the intention of the Automobile Club to oppose the ordinance on the ground that it is oppressive, unduly prohibitory and unconstitutional.

Locking Clause Indefinite.

A feature of the Massachusetts law which goes into full force August 1 that seems to be causing special question is the requirement for a locking device to prevent the machine from being set in motion while its owner or operator has left it standing in the street. The act merely says that each vehicle "shall be provided with a lock, key, or other device" and requires the person in charge to lock it or make it fast before leaving it. Just what kind of a device will satisfy the conditions is being asked by applicants, and without special examination in each instance the commission can give them little more information than is contained in the wording of the act.

NEW VEHICLES

St. Louis 9-Horsepower Tonneau.

Although most gasoline automobile manufacturers in America are now building at least one model of the tonneau type, the vertical cylinder motor has not received such universal adoption, a considerable number of vehicles still testifying to the popularity of the horizontal motor in this country.

An example of this construction is shown in the accompanying illustration. The horizontal engine has a single cylinder of 5 1-4 inch bore by 6-inch stroke. It develops 9 horsepower at a normal speed of 800 revolutions. The transmission is of the shifting pinion type, the mechanism being mounted in the crank case of the motor, so that the engine and change speed gear forms a unit, both being lubricated on the splash principle by action of the motor crank. This construction assures perfect alignment of all bearings, reduces complications of parts, and at the same time saves considerable in the cost of manufacture. The two forward speed changes and the reverse are operated by a single interlocking lever, so arranged that it cannot be moved without first drawing the clutch. The main bearings of the engine and transmission are provided with ring oilers.

The circulating system is very simple, no pump being used. To insure perfect thermo-syphon action the connecting tubes

gauge which indicates the level of fuel, this gauge being exposed by lifting the lid of the tool box which is built into the dash of the car. The carbureter is fitted with a throttling device, operated by a foot pedal or button.

An angle iron reachless running gear is used, which carries the entire mechanism and the vehicle body. The front wheel

Richard-Brasier Cars.

The first of the new Richard-Brasier cars to reach America was recently received from France, the incident recalling the fact that M. Brasier, until about five months ago the general manager and engineer for the well-known Mors Company, resigned at that time to become a member of the Georges Richard organization, the



ST. LOUIS TONNEAU CAR WITH 9 H. P. HORIZONTAL MOTOR.

and rear axle bearings are provided with large roller bearings. A spur differential gear is built into the rear axle, a single chain driving to a sprocket mounted on the outside of the differential. A clutch lever brake operates direct on the transmission, while two other brakes operated by a foot pedal work on the internal expanding principle within the hub of the rear wheels.

Wheel steering is employed, the opera-

name of the concern being changed to the Richard-Brasier Company.

The Richard-Brasier car has been watched with much interest on the other side of the Atlantic, where its performances have been very creditable, one of its latest achievements being the winning of the Ghilde cup at the recent Phoenix Park speed trials, in Ireland, when a standard 12-horsepower car of this make covered the mile in 1:15. It is an interesting fact



FIRST OF THE NEW RICHARD-BRASIER CARS IMPORTED FROM FRANCE. 12-H. P. TONNEAU TYPE.

are large and as straight as possible, and the radiator has only four tubes.

Jump spark ignition and a double-battery equipment completes the electric apparatus, and a float-feed carbureter placed close to the cylinder head supplies the gas, the gasoline being carried in a ten-gallon tank which forms the back part of the hood. The tank is provided with a glass

tor sitting on the left side of the car, the motion to the steering wheels being transmitted through the medium of a pinion and rack arrangement which is encased and runs in oil. The wheels are of wood, shod with double tube tires.

This vehicle is built by the St. Louis Motor Carriage Company, of St. Louis, Mo. It accommodates four passengers.

that the Richard-Brasier car which is now in New York is of this same power and type, being an identical machine, in fact.

As will be seen from the accompanying illustration the car is of very attractive outline, with a roomy tonneau, which may be removed, the motor bonnet being of especially neat design, conforming to the other lines of the vehicle, all of which are

well turned, the whole presenting a very finished appearance. The body is made entirely of aluminum and upholstered in leather. The front seat is of the divided type, the curved edges being brass-trimmed, the motor bonnet also displaying considerable polished brass.

The mechanical features of the Richard-Brasier car are of more than usual interest, the motor being extremely self-contained, compact and excellently finished. It is of two-cylinder vertical type, developing 12-horsepower at a normal engine speed of 900. The cylinders, each of 4-inch bore and 4 1-2 inch stroke, as nearly as the French measurements can be expressed in English, are cast integral. The motor speed is controlled by means of the usual spark mechanism and a throttle governor, the action of which may be checked by depressing a small foot pedal. The throttle valve is not a part of or attached to the carburetor, but is mounted on top of the motor cylinders, and incorporated in the dome covering the inlet valves. In this way the action of the governor is instantaneous because it acts on the gas supply just before it passes through the inlet valves, and not at a distant point, in which instance the surplus must be used before the action of the governor is effective. The carburetor is of usual float-feed type, mounted low at the left-hand side of the motor, and connected to a large brass gasoline tank mounted on the vehicle dash. This is fitted with an adjustable float, so that readings of the amount of fuel in the tank can be readily taken while the operator is driving.

In addition to the usual half-time shaft, gear driven from the motor shaft, which operates the governor, there is a second shaft, also gear driven, which drives the circulating pump and the ignition cam. The entire governor mechanism, and the circulating pump, are enclosed in suitable cases forming part of the aluminum motor case, the whole being very compact and workmanlike in appearance. That part of the case protecting the governor and pump is easily removable, it being held in place by suitable screws. The radiator is made up of a continuous flattened tube, with very wide fins; the water tank, of five gallon capacity, is located under the footboard.

The clutch, which is of cone type, is 12 inches in diameter. It is actuated by an ordinary foot pedal, but instead of the usual grooved collar and jaws used to draw the clutch, the foot pedal lever is provided with simple plates of brass, suitably pivoted, which press against the end of the collar when depressing the pedal to withdraw the clutch. When the clutch is engaged there is no friction in these parts. The clutch communicates with the transmission through a universal jaw arrangement, the jaws of which slide together, permitting any amount of end play but no lateral motion, assuring a very easy movement of the clutch cone.

The transmission permits three forward speeds and a reverse, with direct driving on the high speed. A powerful internal band brake is enclosed within the transmission case, and actuated by a foot pedal. The differential gear and bevel driving gears are enclosed within a cast-steel casing incorporated in the rear axle, the power being transmitted by means of the usual universal jointed propeller shaft.

MASSACHUSETTS AUTOMOBILE LAW CONSTRUED IN FAVOR OF TOURING MOTORISTS.

Staff Correspondence.

BOSTON, July 27.—In regard to autos running into Massachusetts from other States, the Highway Commission has interpreted the new law to mean that, "An automobile or motor cycle properly registered or licensed in some other State than Massachusetts, and operated by a chauffeur properly licensed in some other State, may be run over the highways of this State without the registration of the machine or the licensing of the operator by the Massachusetts Highway Commission. Evidences of the registration of such vehicles and of the licensing of their operators thereof must, however, be carried on or in the vehicles." The law itself was not quite explicit in regard to this kind of travel.

Automobilists here are moving so slowly in the matter of getting themselves licensed and their machines registered, that unless things get livelier pretty soon, there is likely to be a "freeze-out" for somebody when the clause requiring numbers on all machines goes into effect Sept. 1. Curiously enough, even some of the dealers and experts around Boston have held lazily to the idea that the whole law does not go into effect until Sept. 1; and this has made them neglectful as to just what would be required of them. So they have delayed applying for certificates and licenses, and at present no more than 500 applications have been listed on the highway commissioners' books.

It happens also that the people who have the contract for making the number plates which are to be furnished by the State, are slow in filling their contract, and it looks as if all the numbers might not be on hand when the law goes into effect. In that case, those who applied early will receive their plates first, and be ready to operate without breaking the law from the outset.

This situation is complicated by the fact that the number plates may not run consecutively in their respective series. For instance, while most operators will wish simply one set of numbers—the requirement for a single machine—there will be a number of dealers, probably, who will wish several duplicate sets of the same number, in order to take out a "manufacturers' or dealers'" license.

The best way to avoid trouble or inconvenience is to apply as early as possible for registration and license certificates. Early action has another advantage: Where an applicant has a park number for his machine already, the Highway Commission will try to give him the same number under the State law. This latter affair is simply one of personal convenience, however, for since the Highway Commission was given charge of the licensing and registration throughout the State, the Park Department of Boston—which heretofore was the only body requiring any kind of a license for autos in this State—has decided to give up its own numbers and depend on those required by the State for recognizing autos driven in the parks. The Park Department still requires a special permit issued by its secretary if an auto is to be used in the parks.

It is admitted at the office of the Highway Commission that the law will have to be tinkered with a good deal when the Legislature comes in next January. Conflicting phrases and terms will have to be re-worded. In one section the law uses the word "license" referring to a "registration certificate." In a rough sense this is all right, but inasmuch as the law itself makes a distinction between a license and registration, making one apply to the operator and the other to the machine, it would seem desirable to maintain the distinction throughout in order to avoid any confusion.

Co-Operative New York Garages Proposed.

A circular recently addressed to automobile owners in New York, advocating a system of co-operative garages in different parts of the city, has created considerable comment in the local trade. The proposed plan, as outlined in the circular, is to erect three large stations, one on the east side of the city, one on the west side and the third in Harlem. Besides furnishing accommodations for 100 machines, each garage is to carry a complete line of automobile supplies and parts, all for the benefit of stockholders in the enterprise, but with the privilege of handling outside trade should facilities permit. It is proposed also to provide a place downtown for the storage of owners' cars during the day. The circular is being mailed from the quarters of the Automobile Club of America and bears the printed signatures of Jefferson Seligman, Frederick B. Cochran, Henry S. Thompson, Benjamin Tilt and E. W. Henck.

His Reformation.

He used to have a horse-like laugh,
And he dressed in horsey style;
Was horsey in his talk and chaff,
And he knew the record mile,
But now he's changed; you wouldn't think
He'd known a "book" or "tout";
When he doesn't race a touring car
He speeds a runabout.

N. A. A. M. Reliability Run Roads from Owego to Cleveland.

BY C. H. MARTIN.

CLEVELAND, July 27.—We arrived in Cleveland at 4 o'clock this afternoon after just two weeks and two hours on the road.

We left Owego Monday morning in the rain. The road as far as Smithboro Bridge is good dirt in dry weather. There is one 15 per cent. grade, but not long, near Ellistown. From there on to Corning the roads will be classed as fair dirt, with no bad hills.

At Corning a bad road begins, and from there on to Genesee the roads are a disgrace to the State of New York. Of course there are some good stretches, but they are in the main bad. From Cohocton to Mt. Morris there are many short, steep pitches with bad holes at the bottom, so that it is necessary to come almost to a stop at the foot of the hill, which necessitates going up the other side on the low speed.

From Genesee to Buffalo we came over the old post road, and found it excellent all the way. There are no bad hills; nothing over 6 to 8 per cent.

The roads from Buffalo to Erie are good gravel with a few bad spots. Near the State line there is a dangerous hill. You come on the hill without warning, and make a curve almost at right angles, descend a 12 per cent. grade for about 100 yards and then up a 14 per cent. rise on the other side of the gulch. The road winds, and there is considerable gravel, so I would consider it a dangerous hill.

From Erie to Cleveland the roads are very good with the exception of five miles of sand near Conneaut, O., and three short, steep grades, the worst not over 5 per cent. In the entire distance from New York to Cleveland, there is probably not more than 300 miles over which it is safe to go faster than fifteen miles an hour.

If this route is selected it will certainly be a test, and a very severe one.

Many of the roads would be good if the farmers would keep off of them with their road scrapers. What they call mending the roads means hauling a scraper full of dirt from the ditch and dumping it in the middle of the road, and it stays there just as they put it, for the people drive on each side of the road to avoid it.

We have come through without making a single repair and the machine is in apparently as good condition as when we started.

Coming out of Buffalo we were congratulating ourselves that we had got over the very bad roads without any trouble, and, as we understood that the roads were fair all the way to Cleveland, we figured on getting through with the same clean record. Stopping for breakfast at a road-house, I turned the gasoline off at the tank. When we came out I cranked her up and

we started, but got only about 500 feet when the engine stopped. Examining the sparking apparatus carefully, it was found all right, the valves were right, and I worked for an hour to try to locate the trouble. Then Mr. Unwin suggested that I look to see whether my gasoline was turned on or not. I had neglected to turn it on and as soon as I did we started off and had no more trouble, except nearer the State line when we ran out of gasoline, having neglected to fill the tank. We could not get gasoline in any of the farm houses near, but did find some kerosene and we poured that in and got through to North East, where the tank was filled with 76. I would not recommend kerosene to be used in preference to gasoline.

The distance from the Knox Automobile Co.'s station (146 W. 39th St., New York) to the Public Square in Cleveland is 676 3-4 miles, and it would be unsafe to go over fifteen miles an hour on half of it under the most favorable conditions.

We will visit the Cleveland factories to-morrow and leave for New York in the evening.

CLEVELAND BUILDERS STIRRED UP OVER SELDEN PATENT COMBINE.

Special Correspondence.

CLEVELAND, July 27.—The Association of Licensed Automobile Manufacturers has commenced its campaign in Cleveland by inserting an advertisement in the daily papers calling attention to the control of the Selden and other patents by the Association, and warning manufacturers and importers against infringements.

The Cleveland manufacturers who are members of the Association include the Winton Motor Carriage Company, Peerless Motor Car Company and the Berg Automobile Company. As is well known, this city is the home of about a dozen other manufacturers of greater or less importance and the effect which this announcement will have upon people who contemplate buying machines built by these manufacturers, as well as the products of other out-of-town manufacturers not on the list, is a matter which is already causing much discussion.

Attorney Kuhns and George H. Day, representing the Association, have spent considerable time in Cleveland of late, and the supposition is that they have been endeavoring to induce certain of the stronger outsiders to come into the fold. On the other hand, a prominent manufacturer, who is one of the chosen, is authority for the statement that some of the weak concerns would not be admitted even though they desired to enter the Association.

One thing is certain. The announcement that law suits await those who enter the business will have the immediate effect of throttling the promotion of new concerns; at least unless a large sum of money can be obtained at the start off. The cost of "belonging" is no small item, if reports are true. It is understood here that admission for membership to the Association calls for the payment of \$2,500 and added to this the applicant is required to pay \$1,000 in advance royalties. The royalty itself is 1 1-2 per cent. of the list price of the car. If the twenty-six concerns mentioned in the list as Association members each paid \$3,500 in advance for the privilege of membership, it means that the Association has a fund of about \$100,000 with which to maintain its position. The developments of this situation are being watched with great interest by all who are in any way identified with the manufacture, sale, or use of automobiles.

IMPORTANT MEETING OF SPRINGFIELD CLUB IN NEW QUARTERS.

Special Correspondence.

SPRINGFIELD, Mass., July 27.—The Automobile Club of Springfield occupied its new club room for the first time last Friday evening. The meeting, which was an adjourned one, was well attended, and much enthusiasm was manifested in the discussion of future events. Eighteen new members were admitted, bringing the membership very close to 100 and giving the club the unquestioned position of the largest club in western Massachusetts. Its membership roll now includes all except a very few owners of private cars in the city.

The matter of most general interest discussed was in regard to holding a two days' race meet this Fall. Offers have been received from Barney Oldfield and other professional racing men to take part in such an event and prominent members of the club state that there is little doubt that the affair will take place, notwithstanding the large expense of putting the Hampden Park mile track in racing trim.

The present quarters of the club are located in the new garage of Whitten & Cameron, 280 Worthington Street. After some indecisive discussion in previous meetings, the initiative was taken by the club's president, Dr. H. C. Medcraft, and a large room was partitioned off in the garage, having a broad street frontage and accessible both from the street and garage.

Dr. Medcraft was chosen president of the club at its meeting July 1, succeeding Harry Fisk, of the Fisk Rubber Company. The Doctor is an enthusiastic motorist and under his direction the club seems to be entering upon an era of marked activity. F. A. Hubbard tendered his resignation as secretary at Friday's meeting, urging the pressure of private business, and it was accepted with regret. B. J. Griffin, president of the Springfield Business College, was elected to the position.

News and Trade Miscellany.

The American Boiler Company, of Chicago, has removed from its old place of business to 85 North Kedzie Avenue.

The Chicago Willow & Rattan Works has removed its plant to 424-426 Blue Island Avenue. A full line of automobile touring baskets and hampers is being manufactured by this company.

One of the busiest places in Buffalo is the salesrooms of the W. C. Jaynes Automobile Company, on Main Street, where local automobilists go to equip their vehicles with the numbered tags required by the new Bailey law.

The Automobile Club of New Jersey has appropriated \$200 to cover the expense of placing signboards at intervals along the road between Highland Park and Perth Amboy, N. J. for the guidance of automobiles driving from New York or Newark to the coast resorts.

Hill & Holt, 81 Bow Street, Somerville, Mass., have recently enlarged their bicycle store and will make a specialty of repairing automobiles and motor cycles. They will also carry a supply of gasoline and lubricating oils, and are prepared to store machines.

Automobile races will be a feature at the Hamilton County Fair at Oakley, O., this year, one day out of the four being reserved from the horsemen to let the people see some *fast* racing. August 18 has been set aside for the automobile races.

Mr. and Mrs. Volney S. Beardsley, of Shelby, O., are touring in the Middle West in their automobile. From Shelby they drove to Milwaukee, Wis., and from there the route will be through Minnesota, South Dakota, Kansas and Missouri, covering a distance of about 3,000 miles.

Automobilists of Manchester, N. H., have organized the Granite State Automobile Club, with the following officers: President, Walter M. Parker; secretary and treasurer, Albert L. Clough; directors, Harry E. Loveren, William J. Hoyt, Fred W. Fisher, Charles E. Greene and A. E. Dumas.

The Searchmont Automobile Co. has had plans drawn and the ground surveyed at Seachmont, Pa., for a one-mile track upon which to test new cars. Work has not been commenced on the track, and it is not definitely assured, but it is expected that the track will be in use before snow flies.

It is announced that the French will conduct an international contest of durability and consumption between Paris and Rome in March, 1904. The route will be from Paris to Rome, via Dijon, Lyons, Avignon, Marseilles, Nice, Genoa and Florence, and \$4,000 in cash will be offered as prizes. The rules will be published in October.

H. H. Higgins and John J. Mason, of the Knox Automobile Co., Springfield, Mass., have taken the agency for the Knox in Baltimore, Md., and will open up a well-equipped station.

Devotees of the automobile in Ogden, Utah, have organized an automobile club, with the following officers: President, A. P. Bigelow; secretary, A. V. Withee; treasurer, F. W. Baker; assistant secretary, John A. Smith; captain, F. H. Blooft.

At the international automobile congress held in Paris recently, one of the most interesting questions discussed concerned an international language. Attention was called to the new language called Esperanto which has spread over a greater part of northern Europe, and all the members of the congress resolved to study it.

The Allyne Brass Foundry Company, of Cleveland, will shortly move into its new fireproof foundry, where ample room will be provided to take care of its increasing business. The Allyne company makes a specialty of automobile work, its aluminum, brass and bronze castings being well known in the trade.

Automobile enthusiasts of Utica, N. Y., have formed the Utica Automobile Club, with seventeen charter members, to succeed the Automobile Club of Utica. The following officers have been elected: President, Edward A. Bushinger; first vice-president, Fred D. Smyth; second vice-president, Robert M. Hunt; secretary and treasurer, Harry M. Mundy.

The Automobile Club of Kansas City, Kansas City, Mo., has elected the following officers for the ensuing year: President, Wm. Huttig, Jr.; first vice-president, Harry Loose; second vice-president, Dr. G. L. Henderson; treasurer, Henry C. Merrill; secretary, Myron C. Albertson; captain, R. Sanborn, and lieutenant, A. C. Griffith.

A catalogue devoted to Grout steam vehicles is published by Grout Brothers, Orange, Mass. The cars described include the drop-front model, a runabout bearing a striking resemblance to a gasoline machine, a large vehicle of tonneau type, a steam truck of 5,000 pounds capacity and a steam delivery wagon. The well-known Grout system of steam vehicle mechanism is illustrated and described, the burner receiving particular attention.

Application has been made to the Governor of Pennsylvania for a charter for a corporation to be known as the Co-operative Automobile Association of America, the object of which is to provide a fund by subscriptions and by the payment of regular installments to enable its members to purchase automobiles on the installment plan. The headquarters of this new organization will be in Pittsburgh.

Charles Greve, a well-known automobilist, whose family is residing at Lake Villa, Fox Lake, for the summer, drives over from Chicago every Saturday afternoon, a distance of sixty miles, going by way of Waukegan. He makes the trip without hurrying, covering the distance in four or four and a half hours, returning to the city Monday mornings.

A story has been going the rounds of the trade to the effect that the Peerless Mfg. Co. is about to be dissolved. This report is true in its application to the Peerless Mfg. Co., which was originally organized to make household goods and is about to surrender its charter, but has no relation to the Peerless Motor Car Co., which took over the interests of the former company in November, 1902.

The automobile and motor works of Clifford Bonneville, near New Rochelle, N. Y., were destroyed by fire on the night of July 28. The works were completed barely a month before, and were supposed to be semi-fireproof, but they burned very rapidly and only a few cars and some light machinery were saved. The fire is supposed to have resulted from an explosion of gasoline.

L. J. Sackett, until lately a salesman for the Locomobile company, has accepted a similar position with the Searchmont Automobile Company, of Philadelphia. This is not the first time that Mr. Sackett has been identified with the Searchmont concern, he previously having been superintendent of the testing department for a year, after leaving the Waltham Manufacturing Company, where he was employed in a similar capacity.

The J. Keller Electric Works, of Cleveland, Ohio, has come into the market with a small electric vehicle. The machine is said to be one of the lightest of this type on the market, as it weighs only 650 pounds. The motor is hung on the rear axle and drives with a sun and planet system of gears. The car has 36-inch wheels and is provided with twelve cells of Willard battery, which it is claimed will give a radius of forty miles. The vehicle has a neat piano box body.

Charles Bartels, operator for August Belmont, again defeated the sleuths of the Long Island Protective League on July 24, when his lawyer proved before Justice Remsen, of Glen Cove, that the necessary sign posts were not in place in compliance with the Bailey law. Bartels was arrested at Glen Cove on July 17 for exceeding the speed limit. As the requirements of the Bailey law in regard to the erection of sign boards had not been complied with by the county authorities, the judge declared that until the county road officials themselves complied with the requirements of the new law they could not expect to compel others to do so, and the case was dismissed.

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